

VON DUPRIN®

Guide to Selecting Panic and Fire Exit Hardware

With so many fire and panic devices on the market today, identifying the right solution can seem like an overwhelming task. This brief guide highlights some important information to gather and discuss with your Allegion architectural services consultant. Allegion consultants understand the nuances of fire and life safety codes and are here to help you translate operational needs into compliant, functional openings.

1. Codes and Standards

Local and regional building codes vary. It is important to determine any special code requirements and be aware of what version of codes have been adopted by your authority having jurisdiction (AHJ). Code requirements also vary based on the type of occupancy classification and the occupant load, therefore it is important to determine these factors and take them into account when specifying door hardware.

In addition, you will want to understand the standards that the panic or fire exit device has been tested to. ANSI/BHMA, UL and Intertek are independent 3rd party listing agencies that establish safety and performance standards for door hardware and conduct independent testing to validate against those standards. Beware of deceptive language and make sure to look for products that are officially certified and listed by these independent agencies.



Quick Survey

- Which code, and version of that code, has been adopted by your authority having jurisdiction (AHJ)?
- What is the occupancy classification and occupancy load?
- Is the door a required egress door, a fire door and/or an accessible route?
- Is delayed, controlled or monitored egress required?
- Are there any unique code requirements for severe weather or other regional requirements?
- What certifications are required (ANSI/BHMA Grade 1, UL 10C, etc.)?

2. Application

The number of cycles per day and the level of abuse an opening is subject to are key factors when determining the appropriate solution that can withstand these requirements. Popular series and their common use cases are shown below.

22 Series for cost conscious applications where a reliable solution is needed for:



MEDIUM TRAFFIC



HIGH TRAFFIC



MULTIFAMILY

33/35 narrow stile for heavy use and abuse openings:



SCHOOLS



HOSPITALS



DATA CENTERS



GOVERNMENT BUILDINGS

70 Series for consistent performance in the following openings:



WAREHOUSES



OFFICE



HOSPITALITY



MULTIFAMILY



RETAIL

98/99 Series wide stile for heavy use and abuse openings:



SCHOOLS



HOSPITALS



DATA CENTERS



GOVERNMENT BUILDINGS



HOSPITALITY



MULTIFAMILY

33/35 Series



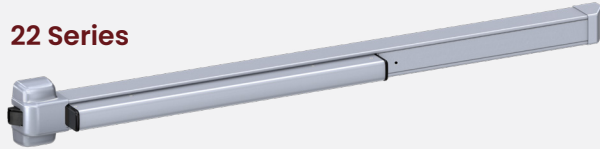
98/99 Series



78/75 Series



22 Series



Quick Survey

- Is the type of building institutional (Healthcare, Higher Ed, K12, Government) or commercial (Retail, Multi-family, Warehouse)?
- What is the opening intended to be used for?
- What is the level of traffic?
- What is the level of abuse?

3. Door Design

Gathering information about the door and its intended function is crucial for proper selection of panic and fire exit hardware. It drives downstream decisions about the appropriate device type, handing and where the latching will occur as well as the form factor of the panic and fire exit device.

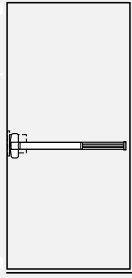


Quick Survey

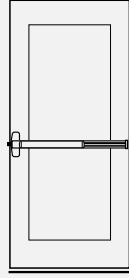
- Number of doors (single or pair)?
 - If pair:
 - Mullion or no mullion?
 - Swing in the same direction (regular double door) or swing outward from the same opening in opposite directions (double egress)?
 - Both leaves active or one leaf active?
- Door material (wood, metal, aluminum, glass)?
- Wide stile or narrow stile?



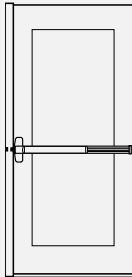
Single Door Applications



Single mortise lock device

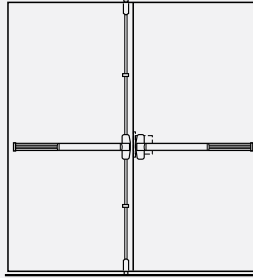


Single rim device

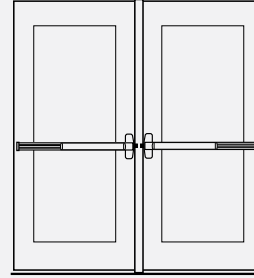


Single three-point latch device

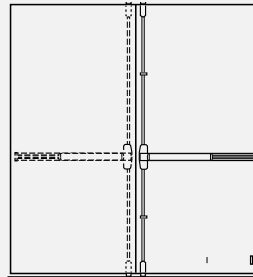
Double Door Applications



Mortise lock and surface mounted or concealed vertical cable/rod device combination—same direction

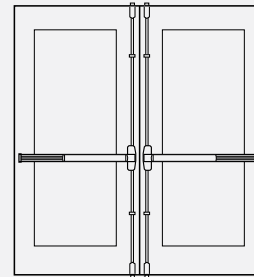


Two rim devices with mullion—same direction



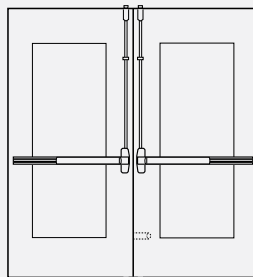
Two vertical rods—double egress

Two surface/concealed rods or cables

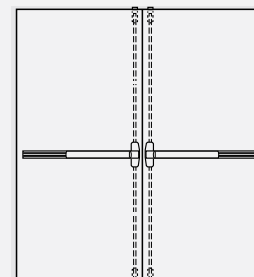


Two surface mounted vertical rod devices—same direction*

* Do not use with overlapping astragals



Two fire exit hardware vertical cables/rods with auxiliary fire latch—LBR option*




Two concealed vertical cables/rods*

4. Latch

Different device types have different styles of latches and different locations of latches that meet the needs of different door configurations. Selecting the appropriate device type depends on many factors such as door type and configuration, durability, aesthetics and desired functionality. A variety of device types are available to meet the needs of your application:

- **Rim:** surface mounted, for single door or double with mullion
- **Mortise:** has a lock body in a pocket inside the door for durability and aesthetics
- **Vertical (rod/cable):** has latching at top and sometimes bottom of the door, can be surface mounted or concealed instead the door. Can be configured for double egress or to swing in the same direction, less bottom latch is also an option in some cases.
- **Multi-point:** combines vertical rods and a rim device, for three-point latching. These may be used for security purposes, or to meet certain code requirements.

 **Quick Survey**

- See questions above on door design.
- Is this a new opening or retrofit?
 - If retrofit, what is the current prep?
- Aesthetic preferences?
- Installation constraints?

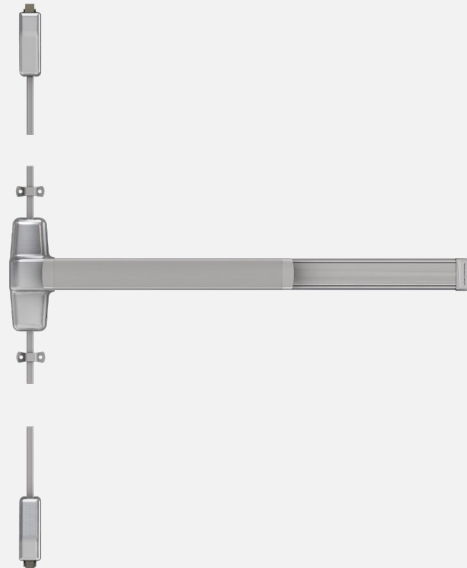
Rim



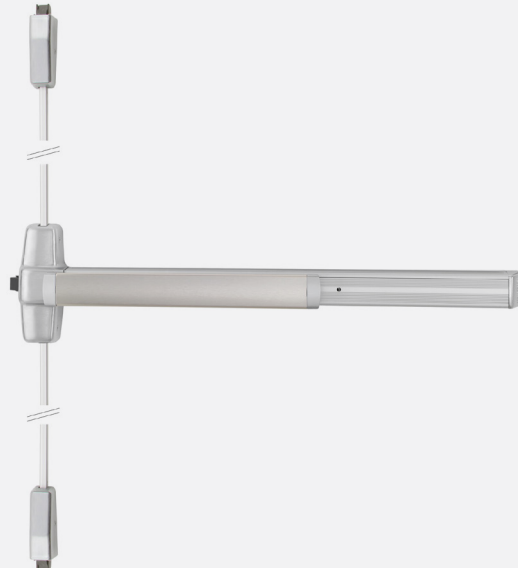
Mortise



Vertical



Multi-point



5. Trim Function

Outside trim or control allows the latch(es) of the panic hardware to retract from the exterior. Available trim options and functions vary by series; the basic options/functions are shown below.

- **Exit only (EO):** No outside trim
- **Dummy (DT):** Rigid lever, knob or pull, no cylinder override (used when device is dogged)
- **Passage (blank escutcheon/BE):** Always operable lever knob or thumbpiece, no cylinder.
- **Classroom (lever/L, knob/K, thumbpiece/TP):** The key locks and unlocks the trim.
- **Storeroom (night latch/NL):** The key temporarily releases either the lever or retracts the latch.



Quick Survey

- Is the door for egress only or will it also be an access point?
- Will the door be mechanical only or have electronic access control?
- Will the door provide access to one individual at a time via a credential, or be open to the public at certain times?
- If open to the public, do you want to dog and undog the door (on the secure side) or lock and unlock the trim (on the outside)?

6. Functionality Required

Exit devices offer a variety of mechanical and electromechanical options to address a variety of applications requirements. It is important to determine the functionality needed for each opening to select the appropriate options. The 98/99 Series offers a higher degree of configurability to address the complex needs of the demanding applications it serves, whereas other series in the portfolio offer a narrower selection of option.

Common mechanical options include (not all series offer all options):

- Security indicators for lockdown applications (-2SI, CDSI and HDSI)
- Cylinder dogging (CD), Hex dogging (HD) or less dogging (LD)
- Accessible device certified to meet 5 lb. force requirements from 2010 ADA (AX)
- Quiet mechanical operation (QM)

Common electromechanical options include (not all series offer all options):

- Quiet electric latch retraction for use in access control applications (QEL)
- Delayed and controlled egress (CX)
- Monitoring switches for latch bolt and request to exit (LX, RX)
- Alarmed exit (ALK)
- Electrified trim (M996)



Quick Survey

- Will the opening be mechanical or electrified?
- What is the desired functionality?
- Describe the operation of the door in normal daily use?
- Describe the operation of the door in emergencies or other special circumstances?
- Are there any unique needs of the population that the facility serves (ex. behavior health, school, memory care)?

Allegion's security consultants are available to partner with you to discuss and review your unique needs and simplify the customization of solutions for you with consultative services every step of the way from planning to specification, installation and beyond.