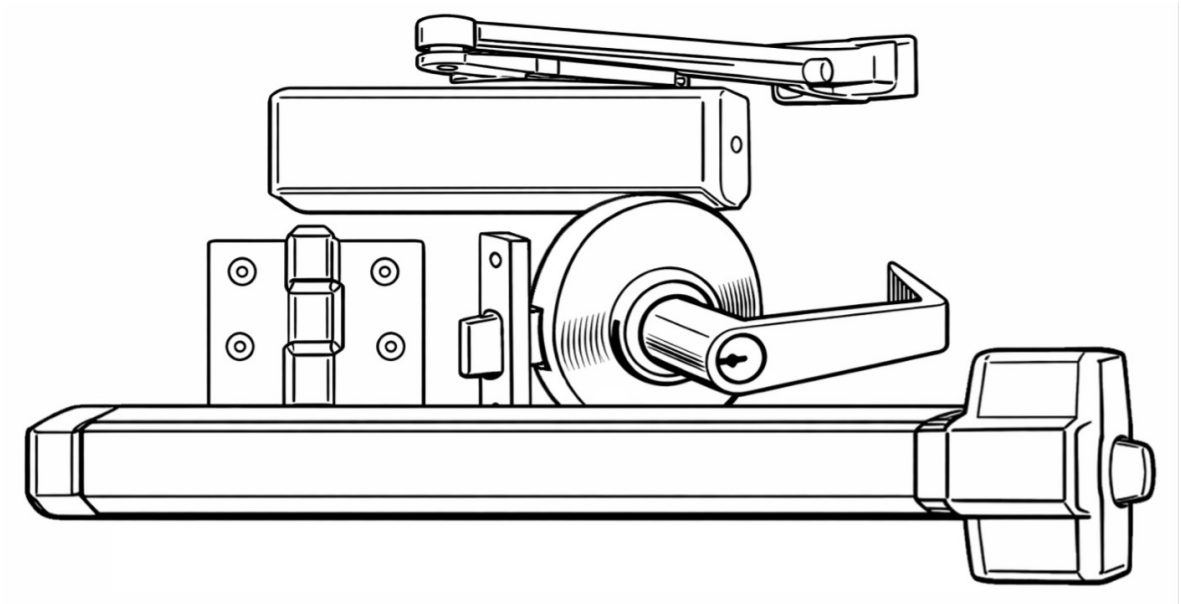
TECHNOTES

Door Solutions for Commercial Hardware



This Technote was created to provide background information related to commercial door hardware that is commonly provided and installed by others on Pella Reserve hinge doors. Please note that the supply of commercial door hardware is a highly specialized trade that is at a level of such complexity that on projects of significance the architectural profession will often rely on local hardware manufacturer representatives to review product applications and provide specific and highly detailed information for incorporation into the architect's Construction Documents on projects.

Special Considerations

1. It is common that Pella Reserve doors be provided with no lock/no bore and the coordination, preparation, and installation of the operating hardware be by others.
2. Commercial door hardware is commonly manufactured for aluminum doors with hollow extrusions which generally conceal portions of the mechanisms. Pella Reserve doors have solid wood stiles and rails resulting in commercial hardware manufacturers being required to provide surface mounted hardware.
3. It should be expected that a hardware supplier would want to be provided with adequate information on the doors being provided. This would include door section details with specific profiles and dimensions to assist in their selection of compatible hardware.
4. On the largest commercial projects where a significant number of Pella doors are being provided a General Contractor could request an option for Pella to predrill doors for the installation of operating hardware by others. In this instance a variance request needs to be submitted by the Pella Distributor and approved by the Pella product variance team.
5. It is recommended that doors shipped without operating hardware be prepped, hardware installed, and the door placed in a closed position as soon as possible to assist in the prevention of panel bow/warp during construction.

6. The industry commonly requires that doors with a height of 96" or greater be provided with three points of locking contact to maintain product warranties against bow/warp. For applications where doors exceed 96" in height and three points of locking contact is desired, consider Bonelli commercial aluminum doors in lieu of Pella Reserve which can be found at the following link.

Hardware Parameters and Recommendations

Pella Reserve Commercial Outswing Doors are not supplied with operating hardware. The following guidelines are being provided as a general reference for the Architect, General Contractor, and their hardware suppliers' consideration.

Mortise Locks: Maximum mortise rout dimensions are shown below for commercial doors with standard stile dimensions (See Figure 1). Maximum height of mortise rout is ten inches. Routs should be sealed before the locks are installed for added moisture protection.

Cylinder Locks: Maximum diameter of cylinder lock bore is 2-1/8 inches. The minimum backset is 2-3/8 inches, and the maximum backset is 2-3/4 inches.

Door Closers: When door closers are required, Pella recommends surface mounted closers that anchor into a structural framing member. Pella door frames have not been engineered for the structural attachment of door closers. Concealed door closers that require the panel to be routed out are not approved for use on Pella doors.

Exit Devices: When exit devices are used on double active doors Pella recommends the use of surface mounted vertical rod hardware; however, it is important to note that surface mounted vertical rod hardware in the area of the bottom rail on doors can be interpreted as not meeting accessibility requirements. Confirm the ability to use surface mounted hardware in the area of the bottom rail with the Project Architect or Local Building Official. Concealed vertical rod hardware that require the panel to be routed out are not approved for use on Pella doors.

Kick Plates and Push Plates: In commercial applications Pella recommends the use of kick plates and push plates to protect the interior wood veneer. To meet accessibility requirements for a 10 inch minimum height at bottom rails it is recommended that all accessible Pella Reserve doors have bottom rails to match the Pella Commercial Door.

Electrified Power Transfer (EPT) Hinges: Provides low voltage power and signals to panel mounted locks and exit devices.

Spring Hinges: Designed to return door to its closed or resting position without manual assistance. An inventory of a select type and finish of factory installed spring hinges are available; however, it is required that a variance request be submitted by the Pella Distributor for approval by the Pella product variance team.

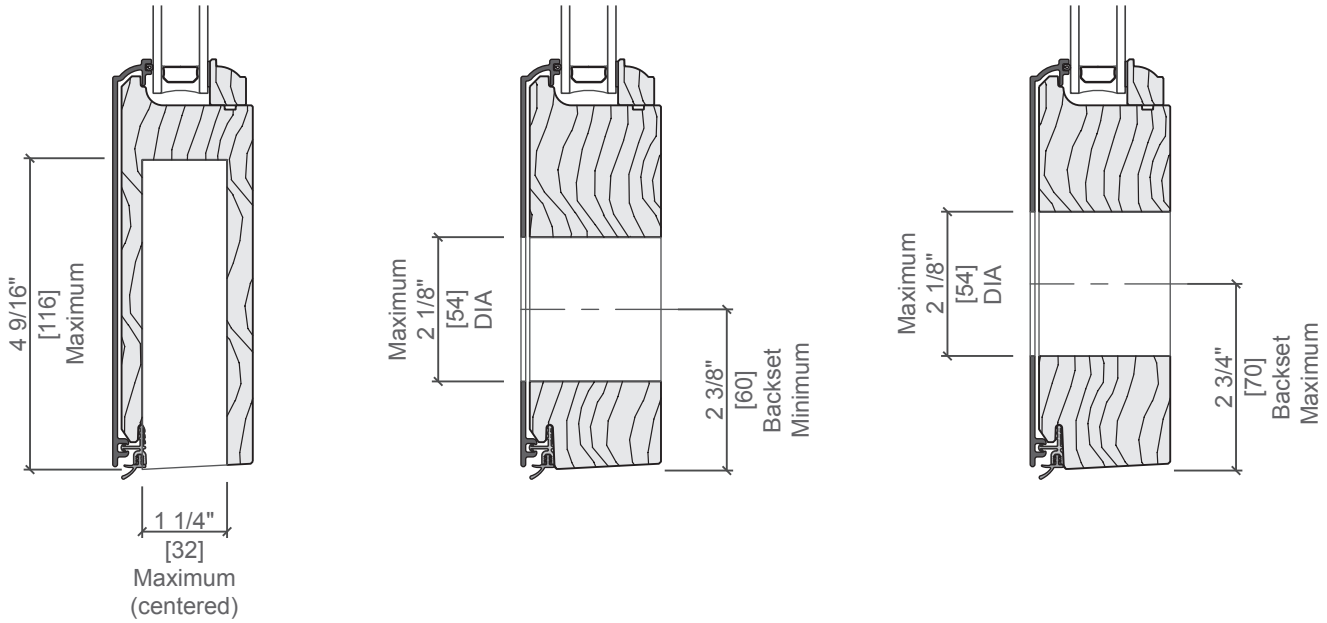


Figure 1: Mortise rout dimensions for commercial door hardware by others.

Commercial Door Hardware Resources

The following is a list of known commercial door hardware manufacturers:

Manufacturer Information			Product Offering					
Manufacturer	Contact	Website	Door Closers	Exit Devices	Mortise Locksets	Security & Safety	Transfer Hinges	Spring Hinges
Dormakaba Architectural Hardware	717-336-3881	www.dormakaba.com	X	X	X			
Sargent Manufacturing Company	800-727-5477	www.sargentlock.com	X	X	X			
Von Duprin	800-999-0408	www.vonduprin.com		X		X		
LCN	877-671-7011	www.lcnclosers.com	X			X		
Schlage	877-671-7011	www.schlagelock.com	X		X			
Hagar	800-255-3590	www.hagerco.com					X	X

Commercial Door Hardware Examples



Example Number 1: Sargent 1430 Closer and 8712-ETL Exit Device (includes trim)



Example Number 2: Von Duprin 1461ALU Closer, 9927EO-26D Exit Device, 26D-994L-R/V RHR and LHR Exit Device Trim, 20-001-606 Morise Cylinder, and 8" x 34" US32D Kick Plate.



Example Number 2: Door without surface mounted push rods below the exit device diminishes the ability of the door to resist warp, twist, and forced entry.