



Specification Guide

*Door & Door Hardware
New Construction, Renovations
Replacements*

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Hollow Metal

Requirements

Exterior Frames

- 14 Gage Galvanized Steel
- Heavy Weight Hinge Reinforcement

Interior Frames

- 16 Gage Steel
- Heavy Weight Hinge Reinforcements

Exterior Doors

- 16 Gage Galvanized Steel
- Heavy Weight Hinge Reinforcement
- Must have Flush Top Cap
- Must Have 14 Gage Closer Reinforcement

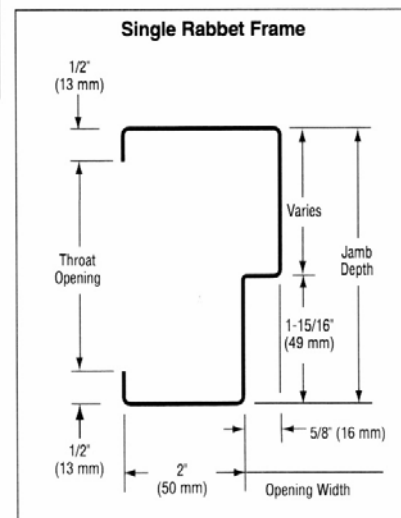
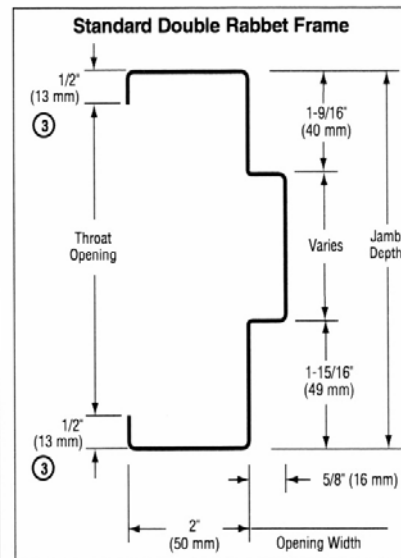
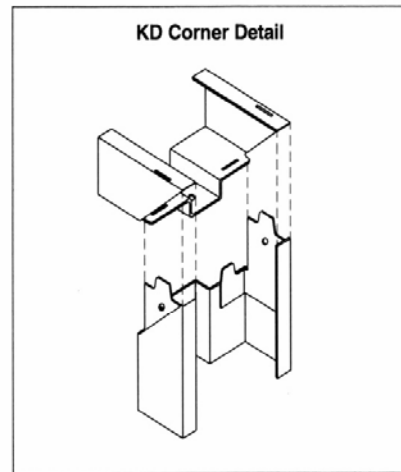
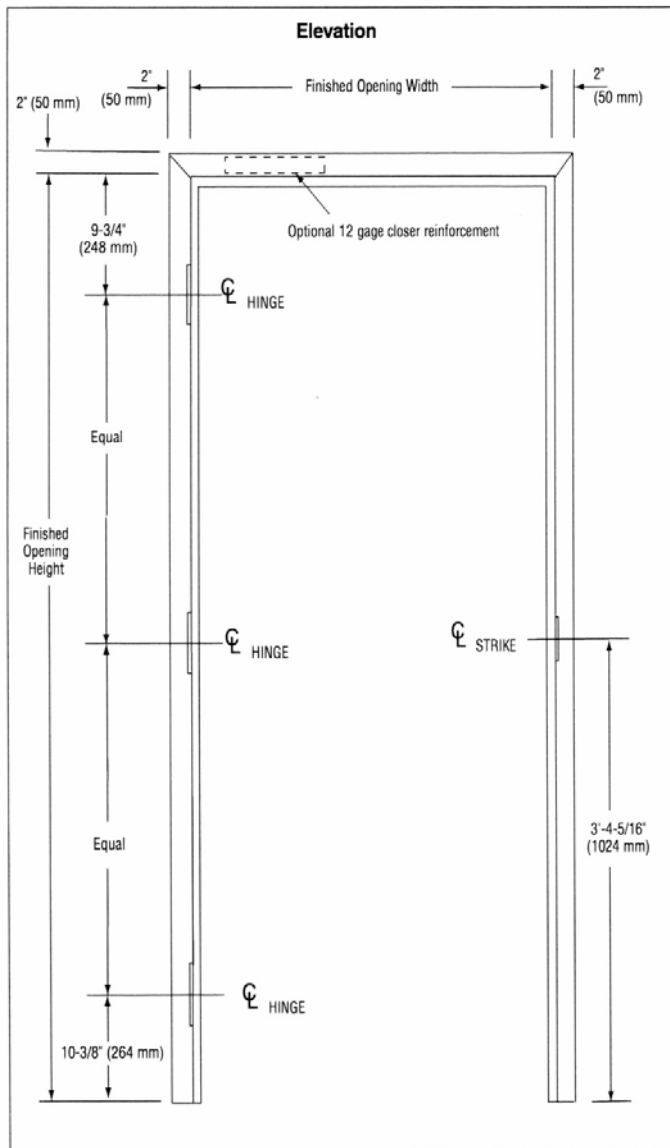
Interior Doors

- 18 Gage Steel
- Must Have Heavy Weight Hinge Reinforcements
- Must Have 14 Gage Closer Reinforcemen

- Note: -All Doors/Frames Must Be Properly Reinforced
For Surface Mounted Hardware
- All Doors/Frames Must Be From The Same
Manufacturer
 - All Frames To Be Welded Construction

Approved Manufacturers

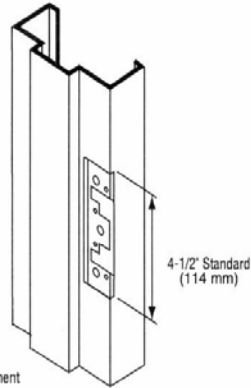
Steelcraft, Curries



CONSTRUCTION NOTES:

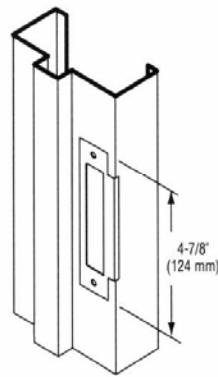
- Door opening size maximum:**
 Single door opening size 5'0" x 11'0"
 (1524mm x 3353mm)
 Double door opening size 10'0" x 11'0"
 (3048mm x 3353mm)
- Jamb depths (profile) availability:**
Single rabbet:
 minimum = 3" (76mm)
 maximum = 12 3/4" (324mm)
Double rabbet:
 minimum = 4 3/4" (121mm)
 maximum = 14 3/4" (375mm)
- Standard profile dimensions (variations available):**
 Face = 2" (50mm)
 Stop = 5/8" (16mm)
 Returns = 1/2" (13mm) all frames
 except 5 3/4" (146mm) which
 is 7/16" (11mm)
- Standard die-mitered corners:**
 Four (4) concealed tabs interlocking
 head and jambs

Universal Mortise Hinge Prep

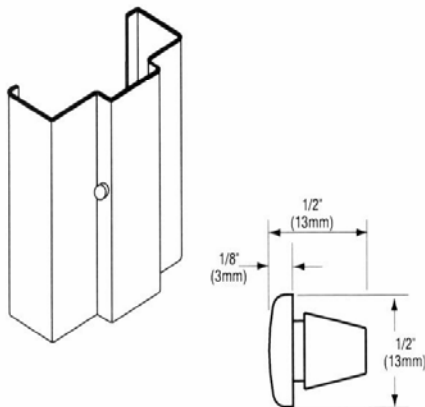


7 Gage Hinge Reinforcement

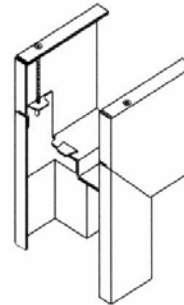
47/8\" Strike Prep



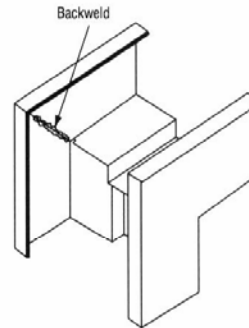
Rubber Silencer



Optional 4\" (102mm) Head Detail

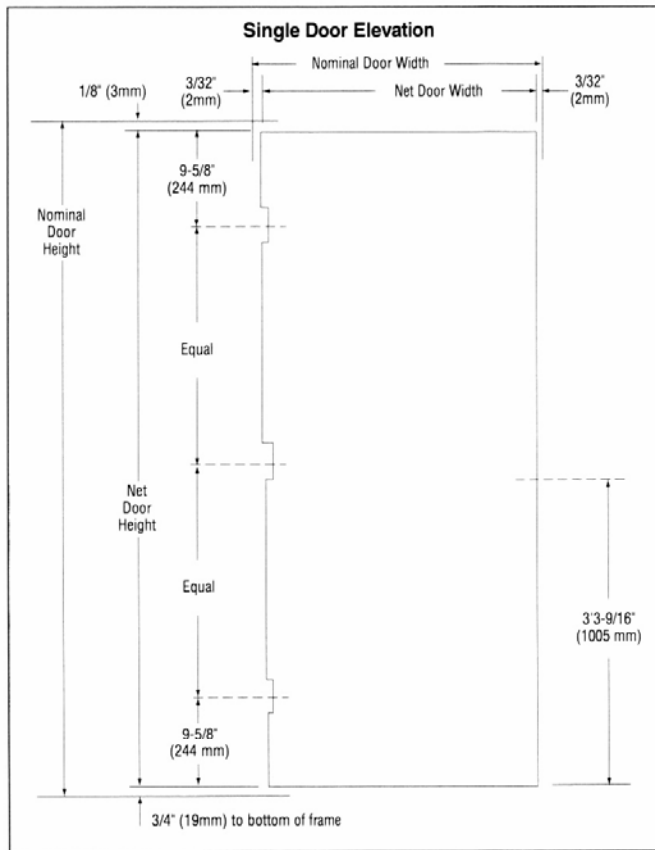


Welded Corner



GENERAL NOTES:

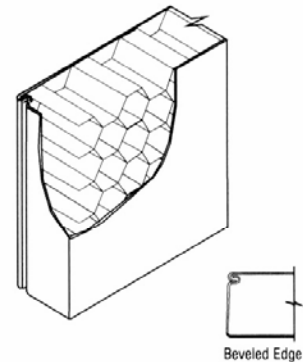
1. **Frame profile** – variations in jamb depths available in 1/8" (3mm) increments:
 - **Single rabbet** – typically for walls less than 33/4" (95mm) thick (2" min.[50mm])
 - **Double rabbet** – typically for walls 33/4" (95mm) thick and over
2. **Corner connections:**
 - **KD (knock-down)** – Factory die-mitered
 - **Double rabbet frames** – 4 tabs per miter
 - **Single rabbet frames** – 3 tabs per miter
 - **Corner Connections – SUA (set-up and welded)**
Available when specified, and in accordance with ANSI A250.8-1998.
3. **4" (102mm) heads** – die mitered for use with 2" (50mm) face double rabbet jambs. Available when specified for KD or SUA applications.
4. **Standard hardware preparations:**
Standard mortised and reinforced with mortar guards for:
 - **Universal hinge preps** – 41/2" (114mm) patented preparation which allows easy and quick conversion from standard to heavy weight hinges.
 - **Strikes** – 47/8" (124mm) conforming to ANSI A115.1 and ANSI A115.2.
5. **Rubber silencers:** All frames are supplied with factory installed silencers to cushion the closing of the door and to eliminate the field problems related to installing the silencers after the frames are installed and grouted. Three (3) silencers per strike jamb and two (2) per double door head.



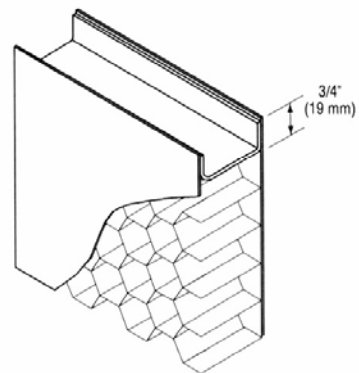
CONSTRUCTION NOTES:

- Doors** are $1\frac{3}{4}"$ (45mm) thick.
- Door opening size maximum:**
Single door opening size $4'0" \times 10'0"$ (1219mm x 3048mm)
Double door opening size $8'0" \times 10'0"$ (2438mm x 3048mm)
- Standard operating clearances** (*installed in frame*):
Head = $1/8"$ (3mm) to bottom of head or transom panel
Hinge and lock side = $3/32"$ (2mm) to rabbet on jamb
- Standard core system:**
 $1"$ (25mm) cell Kraft honeycomb core is laminated to both face sheets with contact adhesive. The honeycomb is phenolic resin impregnated and sanded to insure ultimate lamination and performance. To further enhance the structural stability of the door the honeycomb core material is subjected to several unique operations prior to assembly. If any of these operations are eliminated, the strength and durability of the door is compromised.
- Hardware preparations:** to meet specifications, doors can be prepared for all commercial mortised hardware, and can be factory reinforced for surface applied hardware applications.
 - Lock preps** – details and dimensions shown are for cylindrical (ANSI 115.2) type locks. For mortise (ANSI A115.1) locks, the centerline of the lock is located $3/8"$ (9mm) lower.
- Glass lites with Dezigner® trim and louvers:** doors with glazed cutouts and doors with louvers are available (see *Lites and Louvers* section of *Spec Manual*).

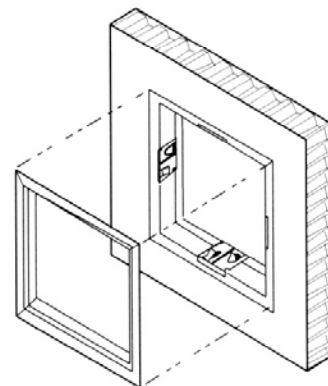
Beveled Edge with Full Height Mechanical Interlock



Inverted Top & Bottom Channels



Dezigner Trim Option



Wood Doors

Requirements

- All Wood Doors To Be Plain Sliced Red Oak
- All Wood Doors To Have Matching Edges
- All Wood Doors To Have 5 Ply Construction

Note: Verify Face Veneer With Owner

Approved Manufacturers

Marshfield, Algoma

Particleboard Core Doors

Positive Pressure with Concealed Intumescents (1) (2) - 20-MINUTE (DFP-20PP)

Product Features
and Specifications

Interior Only (3)

Thickness	1-3/4"
Maximum Size	ITS-WH & UL: 1-3/4": Single: 4/0 x 10/0 Pair: 8/0 x 9/0 (4) Double Egress Pair: 8/0 x 9/0 (4)
Minimum Size	0/8 x 1/10 (5)
Faces	<ul style="list-style-type: none"> • Wood Veneer (5-Ply) • Medium-Density Overlay (MDO) • Decorative Laminate* • Styled™ Door Face
Crossbands	Engineered fiber. *On decorative laminate doors, standard construction is edgeband after decorative laminate face; no crossband is used (3-ply). If doors require edgeband before decorative laminate face, the crossband is used (5-ply).
Stiles	1-3/8" concealed intumescent positive pressure stiles with veneer band or decorative laminate to match face
Top and Bottom Rails	1-1/8" Mill Option (6) (7) (8)
Face Assembly Adhesive	Type I (waterproof)
Core Assembly Adhesive	Type II (water-resistant)
Core	Particleboard (which complies with ANSI A208.1 1-LD-2)
Maximum Size of Lite Openings (9) (10)	<p>METAL VISION FRAMES or WOOD MOULDING (11): DFP-20PP: <u>1/4" wired glass only:</u> Total area of openings not to exceed 1,296 sq. in. of visible glass or one continuous dimension of 36" W or 54" H</p> <p>FIRE-TRIM (12) MOULDING: DFP-20PP: <u>5/16" Firelite® Plus glass only:</u> Total area of openings not to exceed 1,296 sq. in. of visible glass or one continuous dimension of 36" W or 54" H</p> <p>METAL VISION FRAMES: DFP-20PP: <u>3/16" Firelite® NT glass only (13):</u> Total area of openings not to exceed 1,296 sq. in. of visible glass or one continuous dimension of 36" W or 54" H</p>
Other Detail Work (14)	<ul style="list-style-type: none"> • Fitting • Machining • Applied Mouldings • Glazing
Factory Finish (15)	<ul style="list-style-type: none"> • Clear or stain with satin gloss Enviroclad UV™ finish • Prime only • Opaque with flat gloss topcoat
Warranty	Full; life of original installation (3)
Security Rating	Class 40 (16) , highest security rating possible
Acoustic Rating	STC 31 (Inoperable)

- (1) Meets UBC 7-2 (97) Positive Pressure requirements.
- (2) Frame mounted listed and approved gasket required for these doors to receive positive pressure S (smoke) label.
- (3) Use of Marshfield DoorSystems, Inc. doors in exterior applications is not recommended and not warranted.
- (4) On pairs of doors, Pemko S77 gasket used with concealed intumescent stiles eliminates the need for metal edge and astragal (MEA). Pemko S77 gasket or MEA is required for pairs of doors to receive the positive pressure S (smoke) label.
- (5) Either the width or length dimension must be at least 22".
- (6) Wider rails available.
- (7) Bottom rails are a minimum 2-1/2" in doors requiring deep mortise machining for bottom seals.
- (8) Laminated Strand Lumber (LSL) or hardwood at mill option.
- (9) Marshfield DoorSystems, Inc. does not assume responsibility for choice of glazing materials used. Refer to Consumer Product Safety Commission 16 CFR 1201 CAT. II (1-1-97 Edition) to determine the need for safety-rated glazing.

- (10) Minimum distance requirement is 5-1/2" from cutout to any edge and adjacent openings, including hardware cutouts.
- (11) If 1/4" wired glass is used in doors that are shipping to Canada or anywhere that requires hose stream testing, Trim-Lite™ moulding is required.
- (12) 5/16" Firelite® Plus glass required with Fire-Trim wood moulding.
- (13) All Metal 115-I vision frame required.
- (14) All fire-rated doors must be machined by Marshfield DoorSystems, Inc. or other approved fire door machiners. Factory machining of surface-mounted exit devices with face holes 1" and larger is offered.
- (15) All colors may not be available.
- (16) Per UBC standard 41-1 and ASTM F-476.

Standard Lite Mouldings

Appendix A

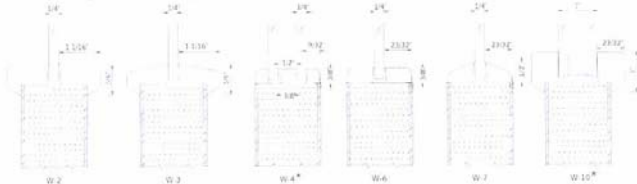
Lite mouldings are installed on one side and the other side is precut for field installation after glazing. Mouldings are set for 1/4" glass or upon request for different glass thickness. Marshfield DoorSystems will factory glaze upon request.

Lite mouldings are installed on one side and the other side is precut for field installation after glazing.

*** On doors with cut-out only, Marshfield DoorSystems does not square out the corners of the cut-out.**

Wood Lite Kits for Non-Rated and 20-Minute Rated Doors

Glazing compound/caulking must be used when installing glass.



ITS-WH and UL approved with 1/4" wired glass only and W-2, W-3, W-6, or W-7

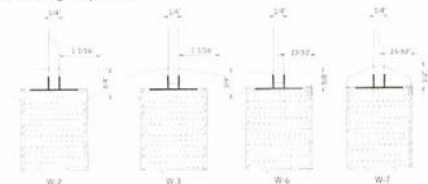
True divided lites are available on non-rated doors using a 1/2" wide divider bar and W-2, W-3, W-6 or W-7 profiles.

Downset may vary due to allowable tolerance deviations in components. 1/4" lip on face on W-2, W-3, W-10

*** Not available as 20-Minute Rated**

Canada Trim-Lite™ Moulding for 20-Minute Rated Doors Requiring Hose Stream

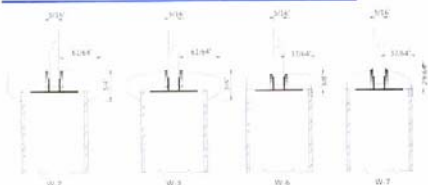
Caulking required.



ITS-WH and UL approved with 1/4" wired glass only. Trim-Lite™ is only required on doors shipping to Canada or any Jurisdiction that requires hose stream testing.

Downset may vary due to allowable tolerance deviations in components.

Wood Fire-Trim System for 20-Minute Rated Doors.



Fire-Trim lite mouldings are for use with 20-minute positive pressure doors and structural composite lumber core neutral pressure doors. Fire-Trim lite mouldings are set for 5/16" FireLite® Plus glass thickness. Marshfield DoorSystems will factory glaze upon request.

ITS-WH and UL approved with 5/16" FireLite® Plus glass only.

Downset may vary due to allowable tolerance deviations in components.

Veneer Clad, Wood Wrapped or Metal Lite Kits for 90, 60 and 45-Minute Rated Doors

Metacaulk caulking required for veneer clad lites over 100 sq. in. (Metacaulk supplied by Marshfield DoorSystems)



ITS-WH and UL approved with 1/4" wired glass only.

Downset may vary due to allowable tolerance deviations in components.

**available in 1" increments only

Marshfield DoorSystems does not assume responsibility for the choice of glazing materials used. Refer to consumer Product Safety Commission 16 CFR 1201 CAT. II (1-1-97 Edition) to determine the need for safety-rated glazing.

Field Glazing Instructions for Non-Labeled and 20-Minute Rated Marshfield DoorSystems doors

- Apply a 1/8" to 1/4" bead of DAP Alex Plus Acrylic Latex Caulk Plus Silicone in the corner made by the glass and the door core. This bead should be applied on both sides.
- Moulding should be installed with 16 gauge 2" finish nails. Nails should be placed 3" from the end of each moulding piece and at 6" intervals thereafter.

- Factory finished doors with applied mouldings, louvers or factory glazed lites will have nail holes filled.
- Doors to be glazed in the field will not have nail holes filled, even if the doors are factory finished.

Note: For more information on lite kits to be used with other glazing materials for rated and non-rated doors, please contact Marshfield DoorSystems Sales & Service Center.

Information on Fire-Rated Doors

Appendix F

MINERAL CORE

Choosing the Right Fire-Rated Door

The rating of the fire door you need is determined by the local building code and the authority having jurisdiction. Marshfield DoorSystems fire-rated doors have successfully completed over 1,000,000 slams without failure (tested per WDMA, TM-7).

Basic Requirements for Installing Fire-Rated Doors

1. Do not remove the classified label.
2. Install in accordance with Marshfield DoorSystems Care & Handling Instructions and NFPA 80.
3. Install listed glass in approved lite kits and carefully follow directions enclosed.
4. Install steel full-mortised butt hinges by drilling 9/64" pilot holes and use #12 x 1-1/4" threaded-to-the-head Type AB screws in accordance with ANSI B18.6.4-1981. Install steel half-surface hinges with fireplates, backerplates and through bolts.

Hinges

The National Fire Protection Association Standard specifies that two hinges must be used for doors up to 60" in height. An additional hinge is required for each additional 30" in height or fraction thereof.

Closers

The Underwriters Laboratories Building Materials Directory catalogs a number of surface-type closers that may be used with labeled fire-rated doors. A surface-type closer is one that does not require the removal of wood except for fasteners. Concealed closers may not be used.

- Surface-mounted hardware can be used on doors with inner blocking, without through bolts.

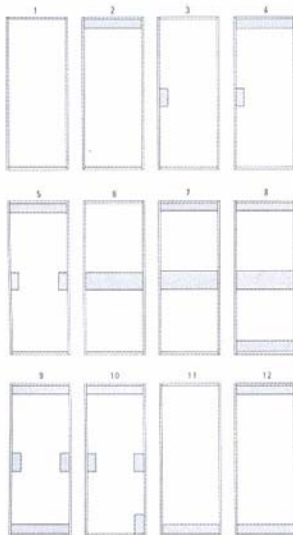
Installation Note

Surface mounted hardware, on mineral core doors, must be anchored on an inner blocked door using a No. 12 screw which penetrates the door by a minimum of 1-1/4". 9/64" pilot holes must be drilled the depth of the screws. Do not use combination screws.

No-Bolt Inner Blocking

The purpose of No-Bolt Inner Blocking is to attach surface hardware and exit devices with screws, thus eliminating through bolts on mineral core fire doors. It is not necessary to use No-Bolt inner blocking on Marshfield DoorSystems fire doors where doors are machined for standard locks.

- Screw Withdrawal Exceeds 700 lbs. (tested per WDMA, TM-10)
- Options for No-Bolt Blocking*:



Note: The blocking in the door is gray in color to distinguish it from the white mineral core.

- Top blocking is 5" high and the full width of the door core.
- Center blocking is 10" high and the full width of the door core.
- Bottom blocking is 5" high and the full width of the door core.
- Exit device blocks may be 5" x 10" or 5" x 18", please specify size required, and corner blocks are 5" x 10".

*This blocking is not required for use with mortise hardware.

Note: Center blocking and exit device blocks can not be in the same door.

AT Rails on Mineral Core Doors

"AT" stands for "Advanced Technology". The AT rail is a white, non-combustible material. There is no lumber or wood in an AT rail. Marshfield DoorSystems uses AT rails for mineral core doors with the following approvals:

Agency Approvals:

Intertek Testing Services – Warnock Hersey and Underwriters Laboratories have authorized usage of:

- Magnetic switches listed for use on wood or composite 45-90-minute fire doors with 2-1/16" AT top rail.
- Bottom seals listed for use on wood or composite 45-90-minute fire doors that are no larger than 1-15/16" deep and 15/16" wide with 3-1/4" AT bottom rails. Bottom seal must be installed with screws and silicone caulk.

Note: AT rails may be used on mineral core doors for other instances by request. They are not necessarily limited to use with magnetic switches and bottom seals. The AT rails can also be combined with No-Bolt inner blocking for closers that require greater than 5" blocking.

Multiple AT rails available in the following sizes: 2-1/16", 3-1/4", 4-7/16", 5"

Kickplates

Kickplates may be attached to the face of the door. The plate used must be an approved material (metal, high pressure laminate, PVC, or acrovyn). The surfaced applied kickplate may be applied with screws or suitable adhesive. The height is not to exceed:

- Up to 48" from the bottom of the door on 20-90 minute doors

Acrovyn Kickplates and PVC by Inpro can be the "full height" of the door for all ratings 20 thru 90-minute, UL label only.

Fire-Rated Lite Systems

Underwriters Laboratories and Intertek Testing Services – Warnock Hersey procedures require that openings be cut at the factory or by a licensed machiner and that approved lite systems be used.

Marshfield DoorSystems will factory glaze upon request. More than one lite opening per door is permitted. For the allowable combined area of the lite opening and limitations, see Appendix G, H and I. There must be at least 5-1/2 inches from lite to any edge and adjacent openings on any fire-rated door in order to retain a classified fire rating.

Independent Certification

The Marshfield DoorSystems fire-rated product line has been tested, and is listed and labeled by Intertek Testing Services – Warnock Hersey (ITS-WH) and Underwriters Laboratories (UL) in accordance with ASTM E-152-73, NFPA 252-73, UBC 43-2(73), UL 10B and CAN4-S104 with hose stream.

For Additional Information on Installation of Fire-Rated Doors

For more information on how to install fire-rated doors, see NFPA 80. For application information, see NFPA 101:

National Fire Protection Association
 P.O. Box 9101
 1 Batterymarch Park
 Quincy, MA 02269
 or
 Installation Guide for Doors and Hardware
 Door and Hardware Institute
 7711 Old Springhouse Road
 McLean, VA 22102

For More Information on Fire-Rated Doors

Underwriters Laboratories, Inc.
 333 Pfingsten Road
 Northbrook, IL 60062
 708-272-8800
 or
 Intertek Testing Services –
 Warnock Hersey
 8431 Murphy Drive
 Middleton, WI 53562
 608-836-4400

Hinges

Requirements

- Hinges on new projects to be 3 knuckle type
- Use Fasteners Supplied By Manufacturer
- All hinges to be 626/652 dull chrome finish
- All hinges at exterior openings to have non removable pins

Number Of Hinges Per Door

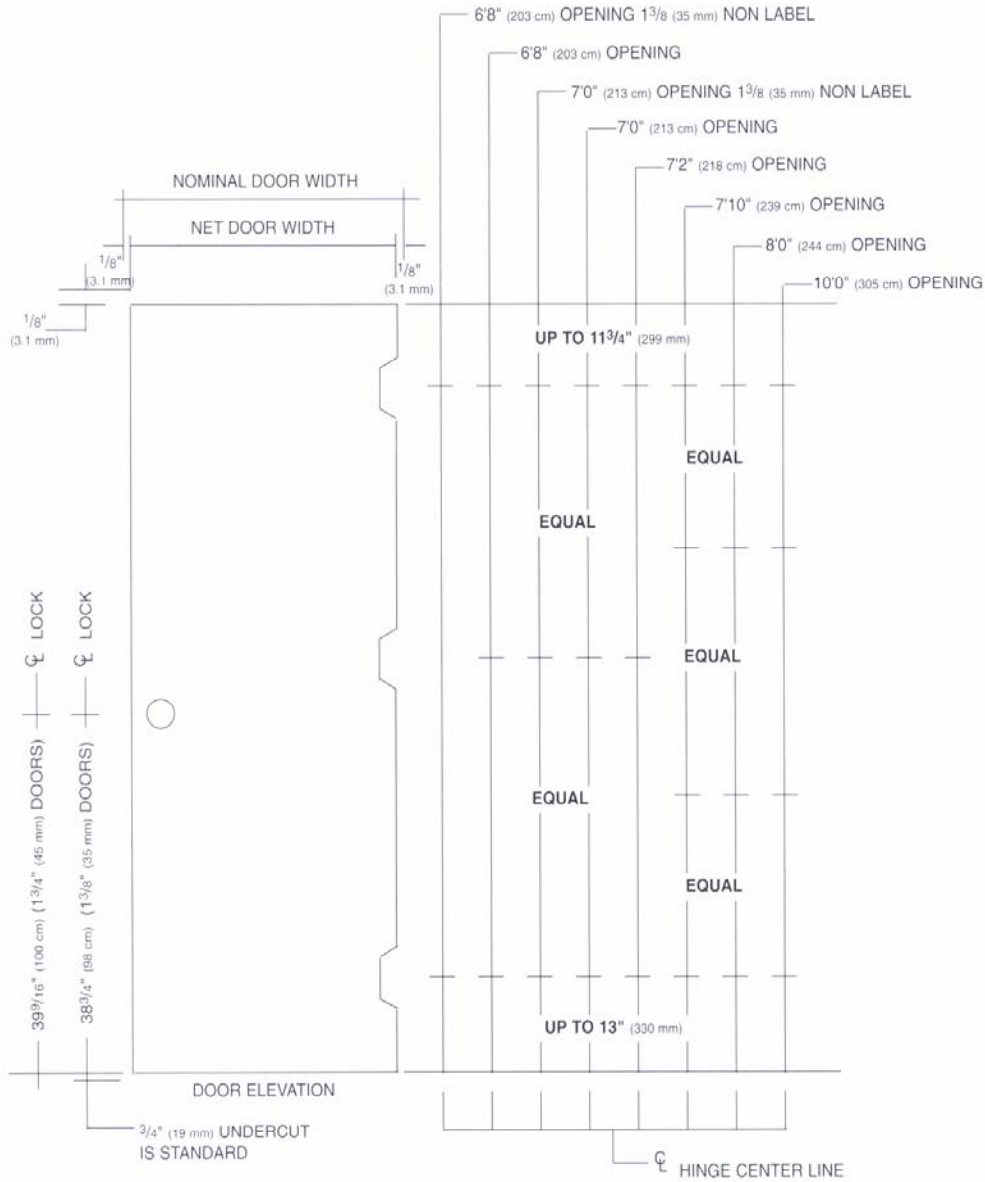
2 Hinges	Doors Up To 60" In Height
3 Hinges	Doors Over 60" Up To 90"
4 Hinges	Doors Over 90" Up To 120"

For Doors Over 120" Add 1 Hinge For Each Additional 30" Or Fraction Thereof

Approved Manufacturers

Hager

Standard Hinge Locations



METRIC CONVERSION

Inches to Millimeters = Inches x 25.4

Millimeters to Inches = Millimeters x .03937

HINGE BACKSET

1/4" (6.4 mm) FOR 1 3/4" (45 mm) DOOR

3/8" (9.5 mm) FOR DOORS OVER 2 1/4" (57 mm)

Full Mortise Hinges

Plain Bearing • Standard Weight • Template

For use on Medium Weight Doors or Doors Requiring Low Frequency Service

700

Steel with steel pin ANSI A8133

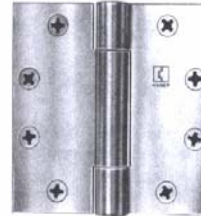
800

Brass with brass pin ANSI A2133

Stainless Steel with stainless steel pin ANSI A5133

Three knuckle non-rising removable pin with concealed pin and plug. Identical in appearance to Tri-Con bearing hinges except "AB" does not appear on leaf under Hager trademark. Specify screw requirements.

**LIFETIME
TRI-CON
WARRANTY**



For Hospital type prefix "HT" to catalog number

Hinge Size		Gauge of metal	Number of holes	Screw Size		Quantity		Avg weight per case (lbs)	
Inches	Millimeters			Machine	Wood	Box	Case	Steel/SSteel	Brass
3½ x 3½	89 x 89	0.119	6	½ x 10-24	1 x 9	2 each	100 each	66	72
4 x 4	102 x 102	0.129	8	½ x 12-24	1¼ x 12	3 each	48 each	43	47
4½ x 4	114 x 102	0.134	8	½ x 12-24	1¼ x 12	3 each	48 each	55	60
4½ x 4½	114 x 114	0.134	8	½ x 12-24	1¼ x 12	3 each	48 each	55	60
5 x 4	127 x 102	0.145	8	½ x 12-24	1½ x 12	3 each	24 each	37	40
5 x 4½	127 x 114	0.145	8	½ x 12-24	1½ x 12	3 each	24 each	37	40
5 x 5	127 x 127	0.145	8	½ x 12-24	1½ x 12	3 each	24 each	37	40

Concealed Bearing • Standard Weight • Template

For use on Medium Weight Doors or Doors Requiring Medium Frequency Service

AB700

Steel with steel pin ANSI A8112

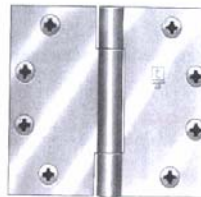
AB800

Brass with brass pin ANSI A2112

Stainless Steel with stainless steel pin ANSI A5112

Three knuckle with concealed hinge bearings, non-rising removable pin, concealed pin head and plug. Specify screw requirements.

**LIFETIME
TRI-CON
WARRANTY**



For Hospital type prefix "HT" to catalog number

Hinge Size		Gauge of metal	Number of holes	Screw Size		Quantity		Avg weight per case (lbs)	
Inches	Millimeters			Machine	Wood	Box	Case	Steel/SSteel	Brass
3½ x 3½	89 x 89	0.119	6	½ x 10-24	1 x 9	2 each	100 each	66	72
4 x 4	102 x 102	0.129	8	½ x 12-24	1¼ x 12	3 each	48 each	43	47
4½ x 4	114 x 102	0.134	8	½ x 12-24	1¼ x 12	3 each	48 each	55	60
4½ x 4½	114 x 114	0.134	8	½ x 12-24	1¼ x 12	3 each	48 each	55	60
5 x 4	127 x 102	0.145	8	½ x 12-24	1½ x 12	3 each	24 each	37	40
5 x 4½	127 x 114	0.145	8	½ x 12-24	1½ x 12	3 each	24 each	37	40
5 x 5	127 x 127	0.145	8	½ x 12-24	1½ x 12	3 each	24 each	37	40

Concealed Bearing • Standard Weight • Template • Wide Throw

For use on Medium Weight Doors or Doors Requiring Medium Frequency Service

AB700 - Wide Throw

Steel with steel pin ANSI A8112

AB800 - Wide Throw

Brass with brass pin ANSI A2112

Stainless Steel with stainless steel pin ANSI A5112

Three knuckle with concealed hinge bearings, non-rising removable pin, concealed pin head and plug. Specify screw requirements.

**LIFETIME
TRI-CON
WARRANTY**



Hinge Size		Gauge of metal	Number of holes	Screw Size		Quantity		Avg weight per case (lbs)	
Inches	Millimeters			Machine	Wood	Box	Case	Steel/SSteel	Brass
4½ x 5	114 x 127	0.134	8	½ x 12-24	1¼ x 12	3 each	24 each	42	47
4½ x 6	114 x 152	0.134	8	½ x 12-24	1¼ x 12	3 each	24 each	42	47
4½ x 7	114 x 178	0.134	8	½ x 12-24	1¼ x 12	3 each	24 each	42	47
4½ x 8	114 x 203	0.134	8	½ x 12-24	1¼ x 12	3 each	24 each	42	47
5 x 6	127 x 152	0.145	8	½ x 12-24	1¼ x 12	3 each	12 each	27	29
5 x 7	127 x 178	0.145	8	½ x 12-24	1¼ x 12	3 each	12 each	27	29
5 x 8	127 x 203	0.145	8	½ x 12-24	1¼ x 12	3 each	12 each	27	29

Hinge testing conforms to ANSI A156.1. Furnished with screw hole locations that conform to standards approved by ANSI A156.7

HAGER WEBSITE: WWW.HAGERHINGE.COM

1A

"THE FIRST FAMILY OF SUPERIOR HARDWARE"

Full Mortise Hinges

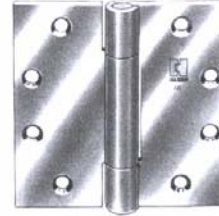
Concealed Bearing • Heavy Weight • Template
 For use on Heavy Weight Door or Doors Requiring High Frequency Service



AB750
 Steel with steel pin ANSI A8111

AB850
 Brass with brass pin ANSI A2111
 Stainless Steel with stainless steel pin ANSI A5111

**LIFETIME
 TRI-CON
 WARRANTY**



For Hospital type
 prefix "HT" to
 catalog number

Three knuckle with concealed hinge bearings. Non-rising removable pin, concealed pin head and plug.
 Specify screw requirements.

Hinge Size		Gauge of metal	Number of holes	Screw Size		Quantity		Avg weight per case (lbs)	
Inches	Millimeters			Machine	Wood	Box	Case	Steel	SSteel/Brass
4½ x 4½	114 x 114	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	38	35
5 x 4½	127 x 114	0.190	8	½ x 12-24	1¼ x 12	3 each	24 each	48	44
5 x 5	127 x 127	0.190	8	½ x 12-24	1¼ x 12	3 each	24 each	48	44
6 x 4½	152 x 114	.203 Steel & Brass .190 SS	10	½ x ¼-20	1½ x 14	3 each	24 each	70	61
6 x 5	152 x 127	.203 Steel & Brass .190 SS	10	½ x ¼-20	1½ x 14	3 each	24 each	70	61
6 x 6	152 x 152	.203 Steel & Brass .190 SS	10	½ x ¼-20	1½ x 14	3 each	24 each	70	61

Concealed Bearing • Heavy Weight • Template • Wide Throw
 For use on Heavy Weight Door or Doors Requiring High Frequency Service

AB750 - Wide Throw
 Steel with steel pin ANSI A8111

AB850 - Wide Throw
 Brass with brass pin ANSI A2111
 Stainless Steel with stainless steel pin ANSI A5111

**LIFETIME
 TRI-CON
 WARRANTY**



Three knuckle with concealed hinge bearings non-rising removable pin, concealed pin head and plug.
 Specify screw requirements.

Hinge Size		Gauge of metal	Number of holes	Screw Size		Quantity		Avg weight per case (lbs)	
Inches	Millimeters			Machine	Wood	Box	Case	Steel	SSteel/Brass
4½ x 5	114 x 127	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	55	60
4½ x 6	114 x 152	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	55	60
4½ x 7	114 x 178	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	55	60
4½ x 8	114 x 203	0.180	8	½ x 12-24	1¼ x 12	3 each	24 each	55	60
5 x 6	127 x 152	0.190	8	½ x 12-24	1¼ x 12	3 each	12 each	32	35
5 x 7	127 x 178	0.190	8	½ x 12-24	1¼ x 12	3 each	12 each	32	35
5 x 8	127 x 203	0.190	8	½ x 12-24	1¼ x 12	3 each	12 each	32	35

Hinge testing conforms to ANSI A156.1. Furnished with screw hole locations that conform to standards approved by ANSI A156.7.

2A

PH. 1-800-325-9995 or 1-314-772-4400 • Fax 1-800-782-0149 or 1-314-772-0744

"THE FIRST FAMILY OF SUPERIOR HARDWARE"

Locksets

Requirements

- All Locksets To Be Grade 1 Series 4000 Cylindrical
- All Locksets To Have ADA Approved Lever Trim
- All Locksets to be Dull Chrome (626) Finish
- All Lock And Cylinders To Be Keyed Into Existing Medeco Key system
- Classroom Locksets To Be Security Type

Approved Manufacturers

Schlage	D Series	Rho Trim	No Substitution
Cylinders		Medeco	No Substitution

Specifications

Applications: Extra heavy duty residential, commercial, institutional, and industrial applications.

Certifications: ANSI A156.2, 1996, Series 4000 Grade 1. (Formerly FF-H-106C Series 161.) U.L. Listed.

Exposed Trim: Wrought brass, bronze, or stainless steel. Levers are pressure cast zinc, plated to match finish symbols. Decorative designs are cast brass.

Keying: 6 pin tumbler with two nickel silver keys per lock. Stock locks are keyed 5 pin. Other keying options available from the factory include masterkeying, grandmasterkeying, construction keying, and interchangeable core. Also available with Primus® high security cylinders.

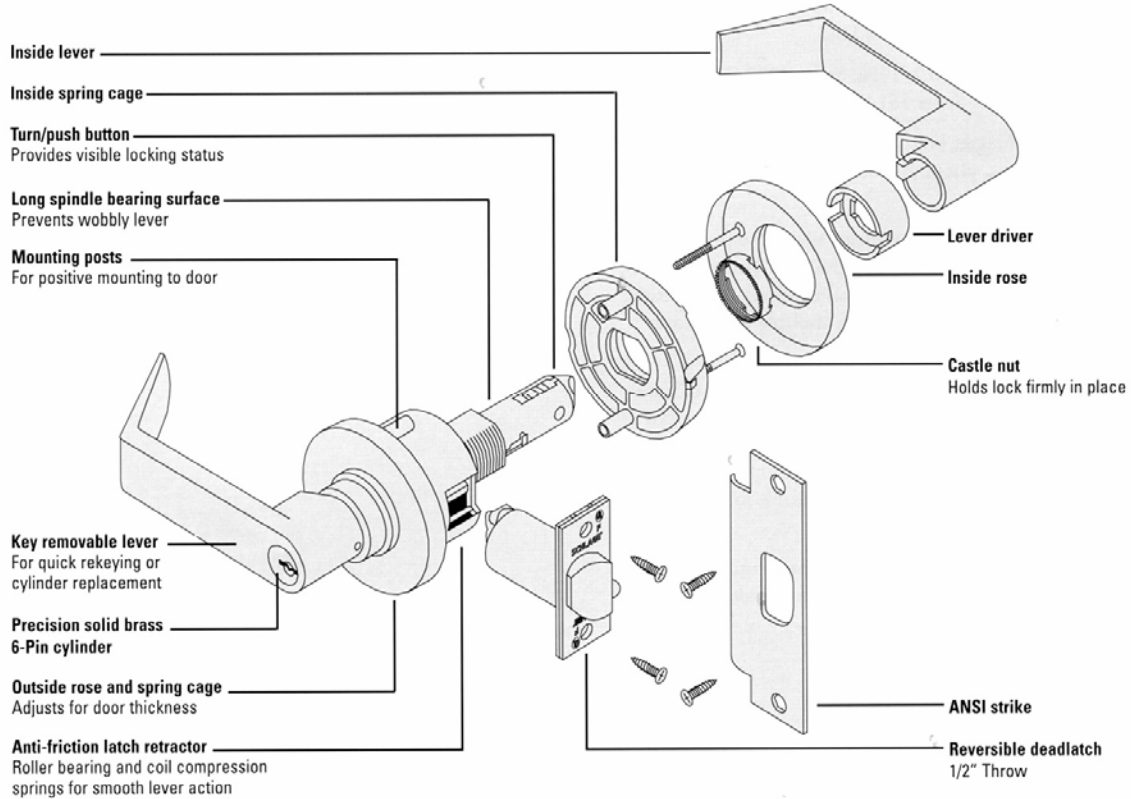
Door Range: Knob and decorative designs 1 $\frac{3}{8}$ " to 2" (35mm–51mm) Standard. 2" to 2 $\frac{1}{2}$ " (51mm–64mm) Regular parts assembled to order. Athens, Rhodes, and Sparta designs 1 $\frac{3}{8}$ " to 2" (41mm–51mm) Standard. 1 $\frac{3}{8}$ " to 1 $\frac{5}{8}$ " (35mm–41mm) Regular parts assembled to order. (Not available for Vandlgard™ Functions)

Backset: 2 $\frac{3}{4}$ " (70mm) Standard. 2 $\frac{3}{8}$ " (60mm) and 3 $\frac{3}{4}$ " (95mm) Backset latches available. 5" (127mm) Backset links available.



D SERIES

Cutaway View



Performance Features

Exceeds 800,000 cycle ANSI Grade 1 requirements.

Exceeds ANSI A156.2, 1996, Series 4000 Grade 1, lock lever torque requirements.

U.L. Listed for 3-hour doors.

Precision solid brass 6 pin cylinder with nickel silver pins and keys available in all Schlage keyways.

Key removable outside lever for quick rekeying and easy cylinder replacement.

Independent heavy duty spring cages for effective lever support.

Thru-bolting mechanism for positive interlock to door.

Non-handed levers.

Concealed mounting screws.

Cylindrical housing—heavy gauge cold rolled steel mechanisms are corrosion treated for normal atmosphere conditions.

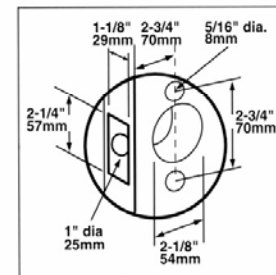
Roller bearings and coil compression springs on anti-friction latch retractors ensure smooth lever action.

Athens, Rhodes, and Sparta available with interchangeable cores.

Available in tactile warning version for handicapped codes.

Interchangeable core, Primus, and Primus interchangeable core cylinders available.

Door Preparation



Functions • D Levers

ANSI A156.2 Series 4000 Grade 1

Non-Keyed Locks

SCHLAGE ANSI

D10S F75

Passage Latch

Both levers always unlocked.



D12D F89

Exit Lock

Outside lever always fixed. Inside lever always unlocked.



D12DEL

Electrically Locked (Fail Safe)

Outside lever continuously locked electrically. Unlocked by switch or power failure. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit.



D12DEU

Electrically Unlocked (Fail Secure)

Outside lever continuously locked until unlocked by electric current. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit.



D25D

Exit Lock

Blank plate outside. Inside lever always unlocked.



D40S F76

Bath/Bedroom Privacy Lock

Push-button locking. Can be opened from outside with small screwdriver. Turning inside lever or closing door releases button.



D44S

Hospital Privacy Lock

Push-button locking. Unlocked from outside by turning emergency turn-button. Turning inside lever or closing door releases button.



D170

Single Dummy Trim

Dummy trim for one side of door. Used for door pull or as matching inactive trim.



Keyed Locks

SCHLAGE ANSI

D50PD F82

Entrance/Office Lock*

Push-button locking. Push-button locks outside lever until unlocked with key or by turning inside lever.



D53PD F82

Entrance Lock*

Turn/push-button locking; pushing and turning button locks outside lever, requiring use of key until button is manually unlocked. Push-button locking; pushing button locks outside lever until unlocked by key or by turning inside lever.



D60PD F88

Vestibule/Classroom Security Lock*

Latch retracted by key from outside when outside lever is locked by key in inside lever. Inside lever is always unlocked.



D66PD F91

Store Lock**

Key in either lever locks or unlocks both levers.



D70PD F84

Classroom Lock*

Outside lever locked and unlocked by key. Inside lever always unlocked.



D73PD F90

Corridor Lock*

Locked or unlocked by key from outside. Push-button locking from inside. Turning inside lever or closing door releases button.



* Available functions for small format interchangeable core.

** **Caution:** Double cylinder locks on residences and any door in any structure which is used for egress are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.

D Levers • Functions

Keyed Locks

SCHLAGE ANSI

D80PD F86



Storeroom Lock*

Outside lever fixed. Entrance by key only. Inside lever always unlocked.

D80PDEL



Electrically Locked (Fail Safe)*

Outside lever continuously locked electrically. Unlocked by key outside or by switch or power failure. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit.

D80PDEU



Electrically Unlocked (Fail Secure)*

Outside lever continuously locked until unlocked by key or electric current. Auxiliary latch deadlocks latchbolt when door is closed. Inside lever always free for immediate exit.

D82PD F87



Institution Lock**

Both levers fixed. Entrance by key in either lever.

D85PD F93



Hotel/Motel Lock

Outside lever fixed. Entrance by key only. Push-button in inside lever activates visual occupancy indicator, allowing only emergency masterkey to operate. Turning inside lever or closing door releases visual occupancy indicator. Rotation of inside spanner-button provides lock-out feature by keeping indicator thrown.

Vandlgard Functions

SCHLAGE ANSI

D91PD F82



Entrance/Office Lock*

Push-button locking. Push-button disengages outside lever until unlocked with key or by turning inside lever. Vandlgard is designed to disengage outside spindle from latch when in locked condition.

D92PD F82



Entrance Lock*

Turn/push-button locking; pushing and turning button disengages outside lever, requiring use of key until button is manually unlocked. Push-button locking; pushing button disengages outside lever until unlocked by key or by turning inside lever. Vandlgard is designed to disengage outside spindle from latch when in locked condition.

D93PD F88



Classroom Security Lock

Latch retracted by key from outside when outside lever is disengaged by key in inside lever. Inside lever is always unlocked. Vandlgard is designed to disengage outside spindle from latch when in locked position.

D94PD F84



Classroom Lock*

Outside lever disengaged and unlocked by key. Inside lever always unlocked. Vandlgard is designed to disengage outside spindle from latch when in locked condition.

D96DP F86



Storeroom Lock*

Outside lever always disengaged. Entrance by key only. Inside lever always unlocked. Vandlgard is designed to disengage outside spindle from latch when in locked condition.

* Available functions for small format interchangeable core.

** **Caution:** Double cylinder locks on residences and any door in any structure which is used for egress are a life safety hazard in times of emergency and their use is not recommended. Installation should be in accordance with existing codes only.

D SERIES

Lever Designs & Finishes



605



ATHENS

Symbol: ATH
Material: Pressure cast zinc lever; wrought brass or bronze rose
Finishes: 605, 606, 612, 613, 625, 626



625



RHODES

Symbol: RHO
Material: Pressure cast zinc lever; wrought brass or bronze rose
Finishes: 605, 606, 612, 613, 625, 626



605



SPARTA

Symbol: SPA
Material: Pressure cast zinc lever; wrought brass or bronze rose
Finishes: 605, 606, 612, 613, 625, 626



Vandlgard™ Keyed Lever Locks

Vandlgard™ is designed to disengage the outside spindle from the latch when in the locked condition. The locked outside lever freely rotates up and down while remaining securely locked. The free wheeling lever eliminates the ability to exert excessive force or to stand on the lever, preventing damage to internal lock components. Available in the Entrance/Office, Entrance, Classroom and Storeroom functions in all of the D-Series lever designs and finishes.

Keyed Lever Locks For Small Format Interchangeable Cores

D-Series Keyed Lever Locks are available with levers and internal components to accept 6 or 7 pin small format interchangeable core cylinders, provided by others, that are manufactured by Arrow®, Best®, Falcon®, and KSP®. Available in Rhodes design only in the Entrance/Office, Entrance, Classroom, Corridor, Storeroom, Electrically Locked and Electrically Unlocked functions. Also available in Vandlgard™ functions. To order, substitute suffix letter P with suffix letter B. Example: D53BD

Note: Athens, Rhodes, Sparta designs are available with tactile markings on the inside of the lever handle for handicap applications.

