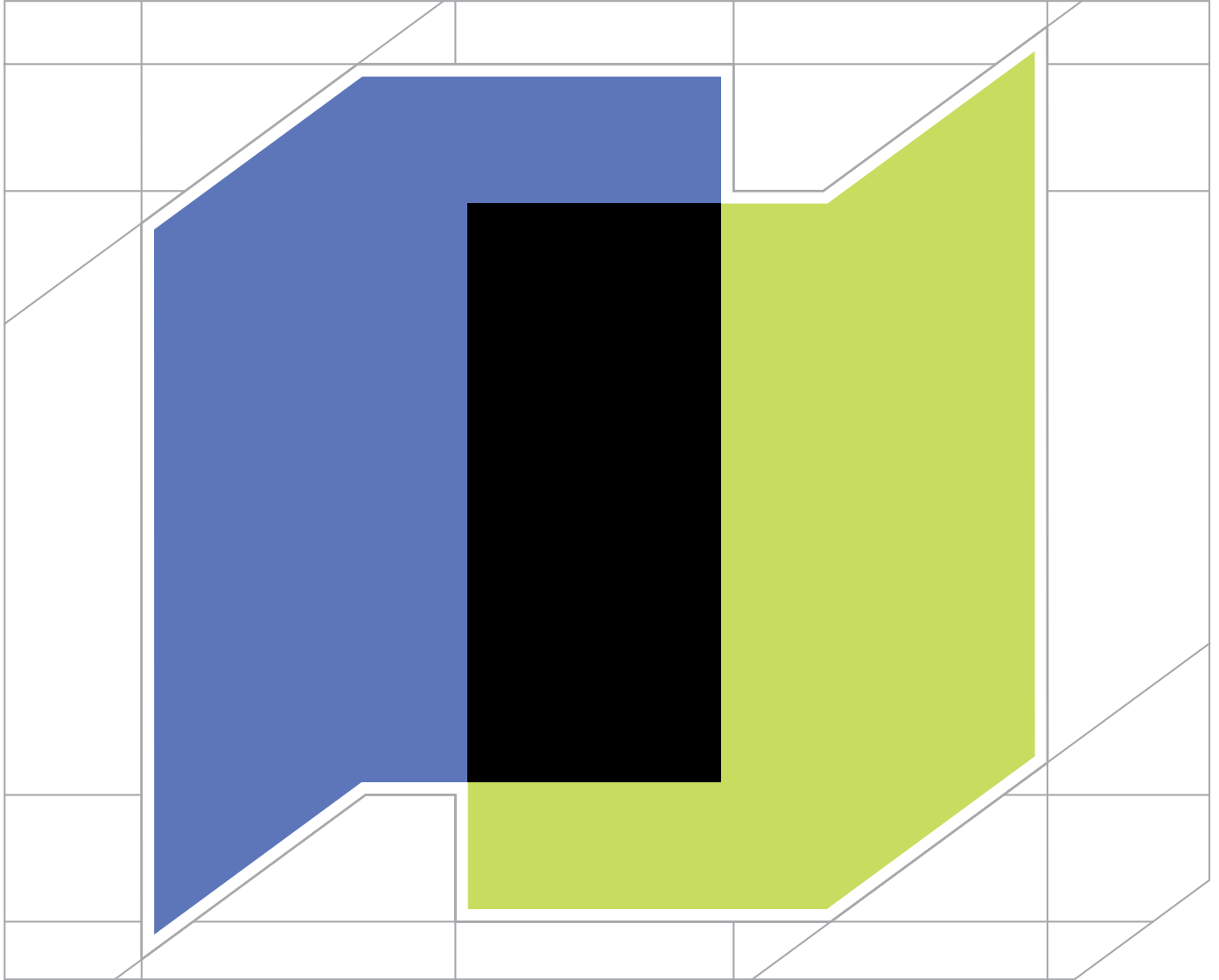
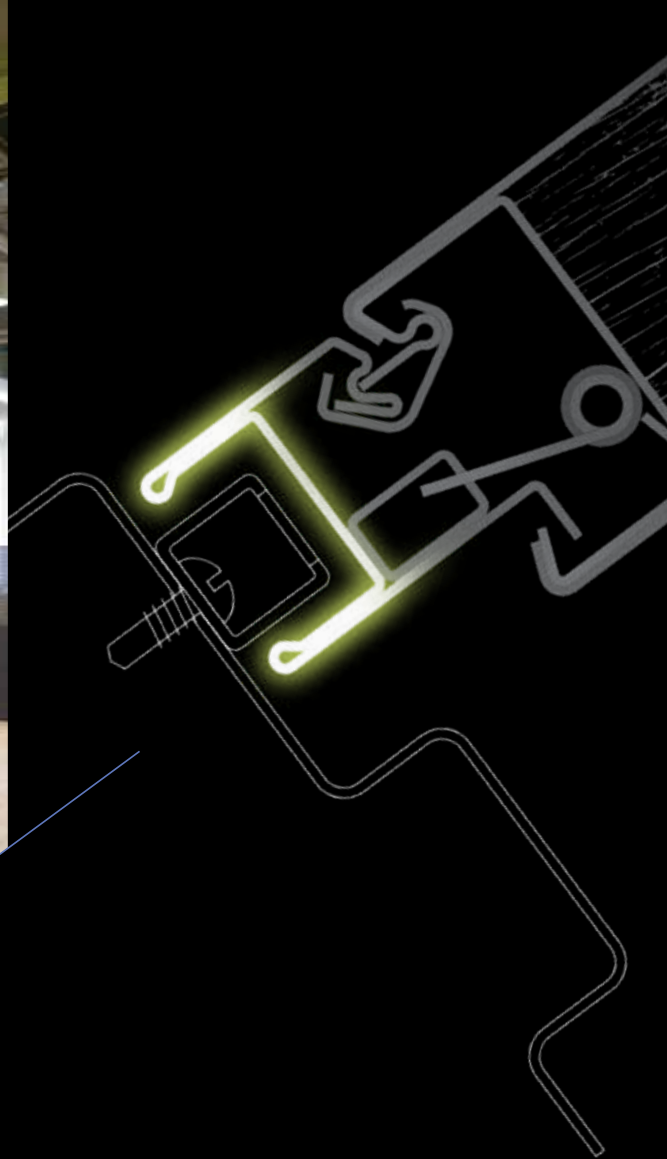


Welcome



Total Door SYSTEMS
Global Leader in Integrated Access Technology®





[Innovation]

is our life blood.

Total Door systems have fewer moving parts, reduced maintenance costs, simpler installation, unbeatable reliability, unmatched security and lower life cycle costs.

Our doors feature a full-height locking channel that acts as a deadbolt along the full-length of the door. It's I-beam shape rotates when open and snaps shut over the full-length latch stop when closed. The locking channel and hinge require no

templating and uniformly distribute loads to the door and frame, providing unparalleled strength and durability. Our exclusive flush panic fire exit device blends nearly seamlessly with the door face, and when closed, meets all fire codes and ADA guidelines. And because our doors and panic devices can accommodate nearly any finish, veneer or face, the only limitation to your design is your imagination.



Total Door SYSTEMS
Global Leader in Integrated Access Technology®



[Innovation]
thrives on
creativity and integrity.

From our beginning, we've looked for the best solutions to door systems. Most times, that meant inventing something entirely new.

Total Door Systems' history goes back to the late 1950s, when inventor Leon Yulkowski developed a revolutionary lock that became the industry standard and is still used today. That appreciation for building the extraordinary led to the development of a complete opening-ready door system that uses components that work together as a unified whole.

TDS doors can be found in hospitals, schools, government and office buildings, shopping centers, hotels and other buildings around the world.

We've even led the industry with our Waterford, Michigan-based headquarters, cited as best-in-class by national manufacturing associations. With 100 percent on-time delivery, sustainable manufacturing processes and the best efficiency and quality track record in the industry, we guarantee our door systems with pride.

What do you want to build today?



Open the door
to possibility



Total Door SYSTEMS
Global Leader in Integrated Access Technology®



Innovation.



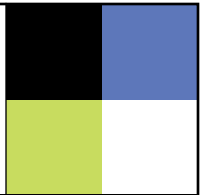
When you're one of a kind, you tend to see possibility where others see limitations.

Proudly independent, American-owned and operated, Total Door Systems is the global leader in the design and manufacture of fully integrated door systems.

We take pride in what we do – precision engineering and making every component and piece of hardware in Michigan to fit together in one cohesive system.

Most importantly, we stand behind our product, 100 percent.





Welcome to Total Door Systems

As a fellow architect, I would like to introduce you to who we are -- a global innovator, engineering integrated door systems that accommodate nearly infinite options for decorative faces and finishes.

This comprehensive product guide provides all the information, details and specifications you'll need to provide your clients with custom door systems that are easy to install, have an extensive life cycle and precisely match your design.

We value your time, and have dedicated design support staff to help you quickly identify and specify a Total Door System for your project. Design support services can be reached at (800) 852-6660 or designsupport@totaldoor.com.

You can also find a wealth of information at our website at www.totaldoor.com.

We look forward to connecting with you soon.

Patricia Yulkowski
Chief Executive Officer
Total Door Systems
(248) 623-6899
patricia@totaldoor.com

For quick reference, the square in the upper right or left corner of each section's pages have been color coded and numbered in the following manner:



Section 1: Configurations / Functions



Section 4: Certifications and Technical Data



Section 2: Finishes & Options



Section 5: Specifications & CAD Drawings



Section 3: Hardware

Section 1:

Configurations / Functions



Configurations / Functions

Standard Door Specifications	1.01
Door System Configurations	1.02
Fire Labels & Maximum Sizes	1.03
Exit Devices	1.04
Grip Mechanisms	1.05
Lever Mechanisms and Trim	1.06
Closing Devices	1.07
SafeFrame®	1.08
Door Functions	1.09
Door Handing	1.10

DOOR BODIES

Skins

- 20, 18 or 16 gauge galvanized steel

Cores

- Solid polystyrene foam continuously bonded to door skins
- Temperature rise cores available

Stiles / Rails

- 16 gauge electrogalvanized steel vertical stiles
- 5-1/2" 18 gauge electrogalvanized steel top and bottom rails

Finishes

- Two-part polyurethane paint in any color
- Prime paint
- Architectural overlays
- Architectural metal, aluminum, stainless steel, etc.
- Various wood veneer species
- Other available on request pending feasibility review

HARDWARE

Hinge & Locking Channel

- The Total Door System is equipped with a heavy gauge high security continuous steel hinge and locking channel with a two-part polyurethane finish
- See standard color chart
- Custom colors available on request

Trim & Locks

- The Total Door System is available with levers, grips and/or exit devices

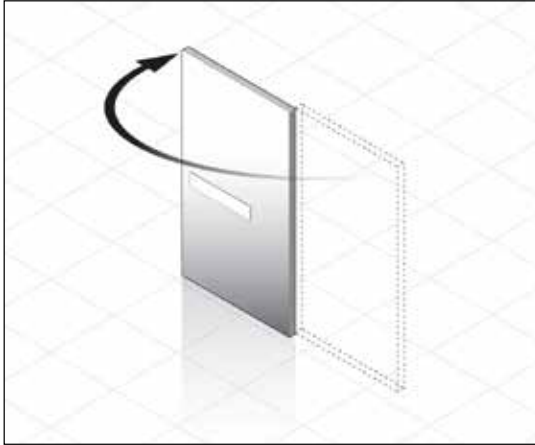
FRAMES

Total Door Systems do not require any special frame preparation or reinforcement. They may be used with a plain cased opening – even in labeled conditions – or may be used with single or double rabbeted frames and masonry openings. In replacement situations, old hinge and strike cutouts need only to be filled in. This does not invalidate the frame label.

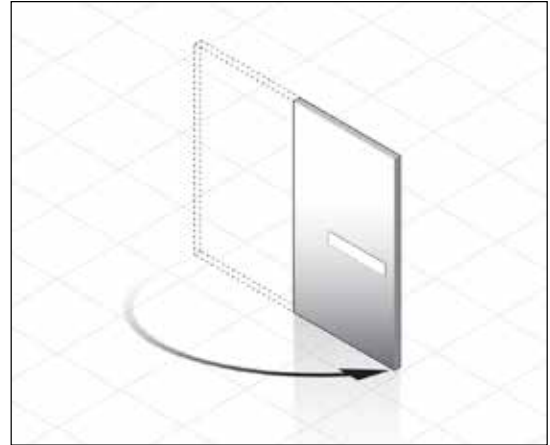
Total Door Systems SafeFrame®, made specifically for elevator shaft protection, provides a complete integrated system that exceeds all testing and code requirements.

SafeFrame® - Elevator Shaft

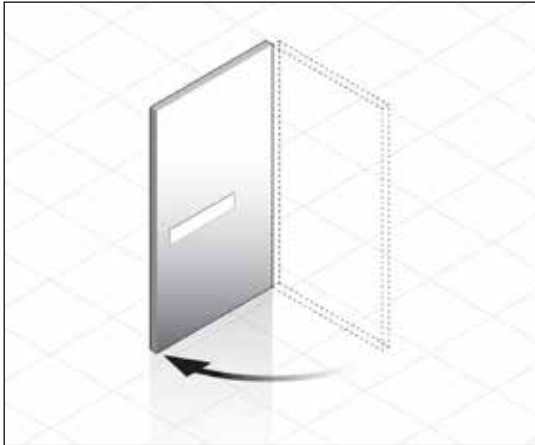
ELEVATOR SINGLE LR HOLD OPEN 180°



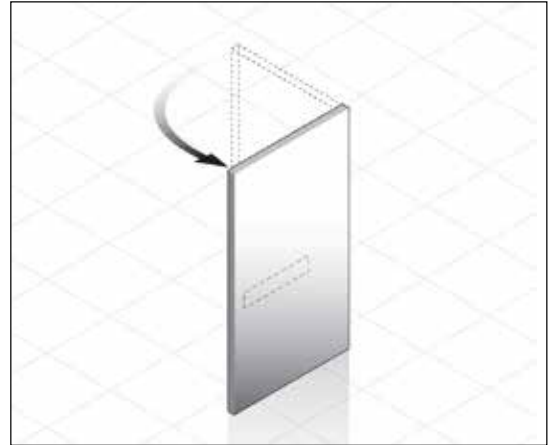
ELEVATOR SINGLE RR HOLD OPEN 180°



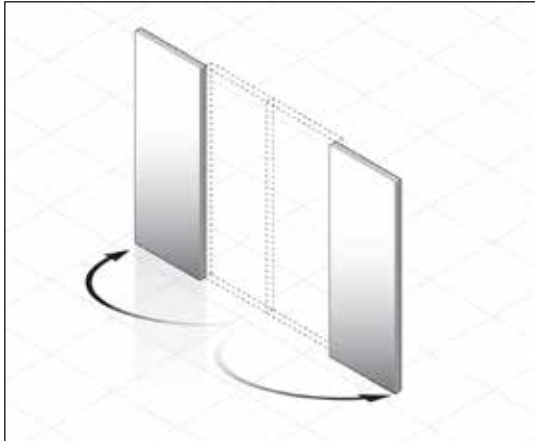
ELEVATOR SINGLE LR HOLD OPEN 90°



ELEVATOR SINGLE RR HOLD OPEN 90°



ELEVATOR PAIR HOLD OPEN 180°



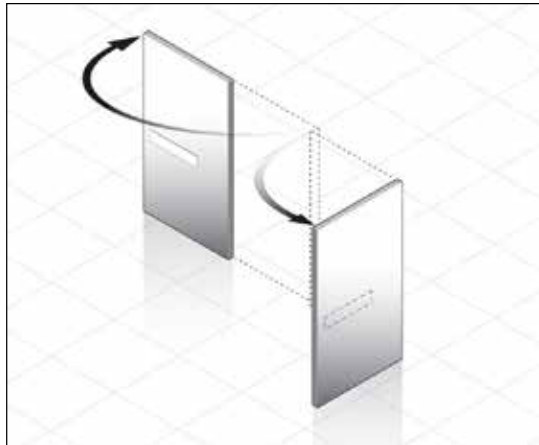
Door Specs and Details

Visit our website www.totaldoor.com or scan the QR code to download our door specifications:

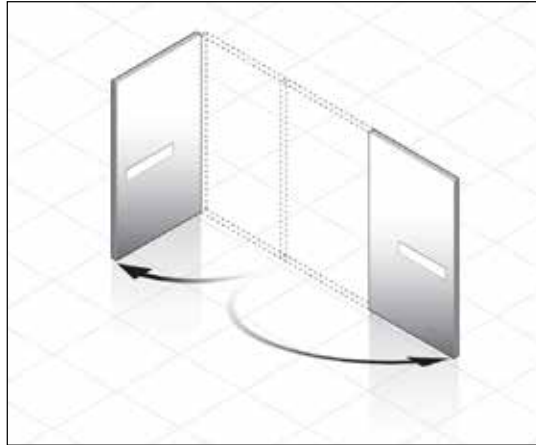


Pair

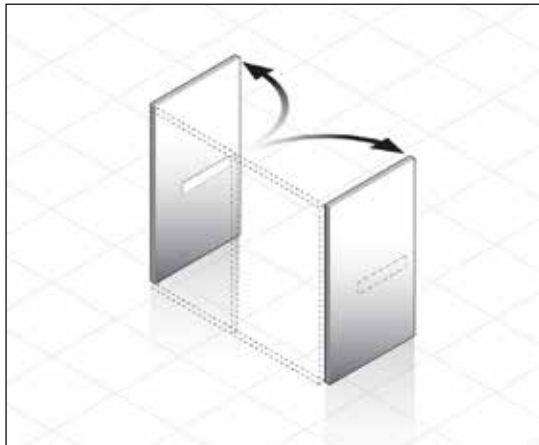
PAIR HOLD OPEN 180° / 90°



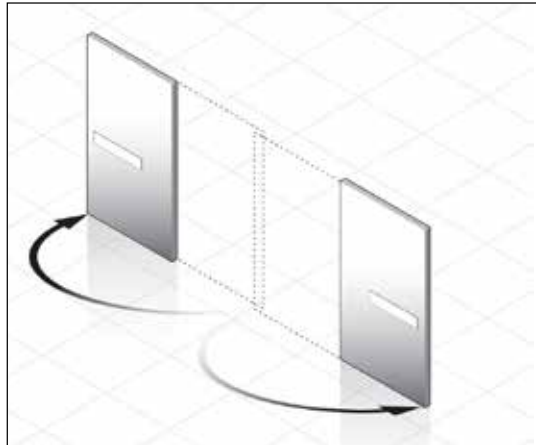
PAIR HOLD OPEN 90° / 180°



PAIR HOLD OPEN 90°



PAIR HOLD OPEN 180°



Door Specs and Details

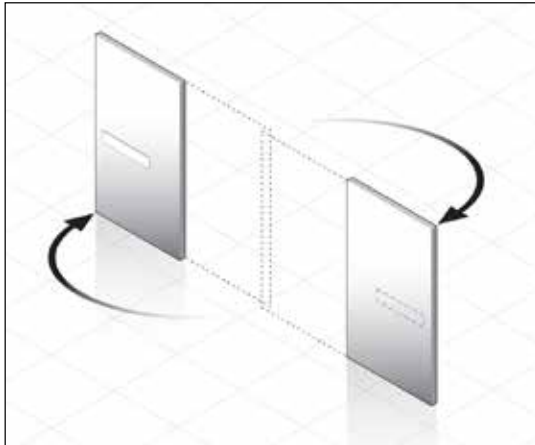
Visit our website www.totaldoor.com or scan the QR code to download our door specifications:



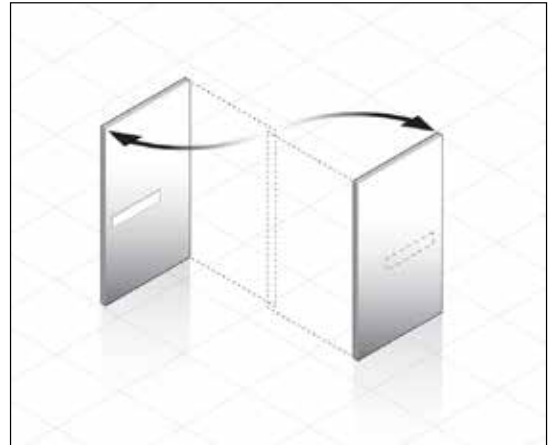
SCAN ME

Double Egress

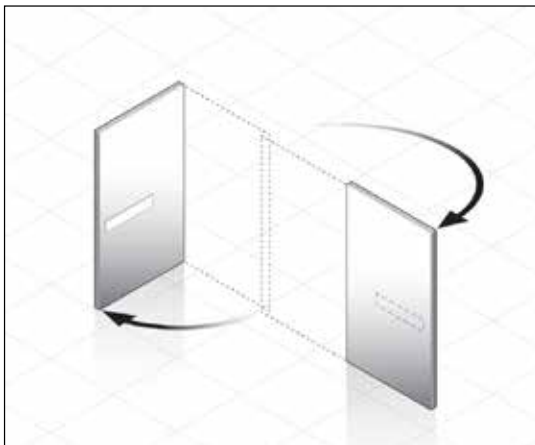
DOUBLE EGRESS HOLD OPEN 180°



DOUBLE EGRESS HOLD OPEN 90°



**DOUBLE EGRESS HOLD OPEN
90°/180°-180°/90°**



Door Specs and Details

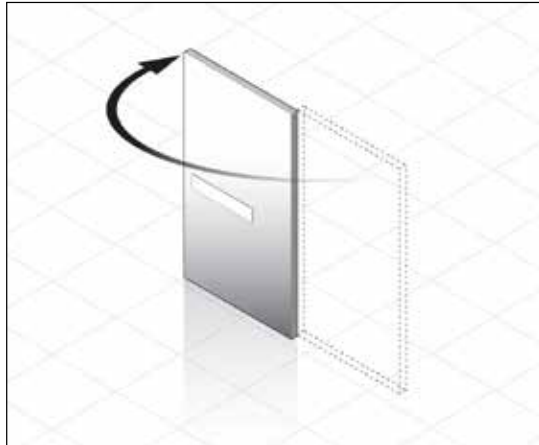
Visit our website www.totaldoor.com or scan the QR code to download our door specifications:



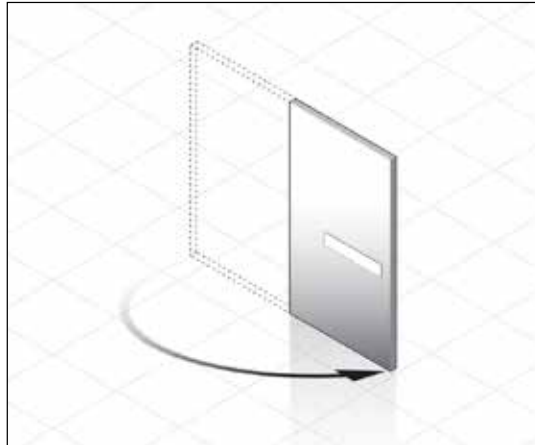
SCAN ME

Single

SINGLE LR HOLD OPEN 180°



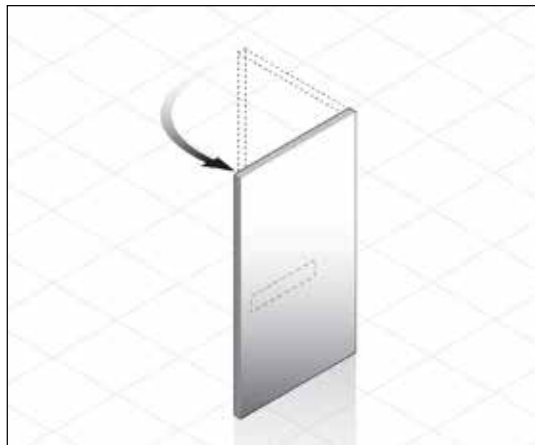
SINGLE RR HOLD OPEN 180°



SINGLE LR HOLD OPEN 90°



SINGLE RR HOLD OPEN 90°



Door Specs and Details

Visit our website www.totaldoor.com or scan the QR code to download our door specifications:



1.03

Section 1 - Configurations / Functions: Fire Labels and Maximum Sizes












		Non Label	20 Min	B & C	A	T-Rise B	T-Rise A
20 GAUGE	Single	4' 2-3/16" x 10'	4' 2-3/16" x 10'	4' 2-3/16" x 9'	4' x 8'	4'-1/16" to 4' 2-3/16" x 9'	N/A
	PR & DE	8' 4-3/8" x 10'	8' 4-3/8" x 10'	8' 4-3/8" x 9'	8' x 8'	8'-1/16" to 8' 4-3/8" x 9'	N/A
18 GAUGE	Single	4' x 9'	4' x 9'	4' x 9'	4' x 8'	4' x 9'	4' x 8'
	PR & DE	8' x 9'	8' x 9'	8' x 9'	8' x 8'	8' x 9'	8' x 8'
16 GAUGE	Single	4' x 8'	4' x 8'	4' x 8'	4' x 8'	N/A	N/A
	PR & DE	8' x 8'	8' x 8'	8' x 8'	8' x 8'	N/A	N/A

A Label = 3 Hours
B Label = 1-1/2 Hour
C Label = 3/4 Hour

Total Door Systems manufactures the most simple, most durable and most design friendly exit device system in the industry. It requires no lubrication and has only two moving parts, including the exit bar.

- Fire rated up to 3 hours
- ADA compliant
- Available with levers or push-pull grips
- Available with cylinder dogging and/or electric remote dogging
- Projection of only 1-5/16" on standard panic
- Flush panic projection of only 5/8" when closed and 1/8" when open
- Factory installed as an integral part of the Total Door System

Available Exit Devices and Trim

Device	Dimensions	Finish Color	Available Finishes	Fire Ratings
  				
P14STP Exit Device 	Standard Based on Door Width 6-11/16" 1-5/16" 24" for widths of 2' 4" and wider 15" for widths between 1' 6" to 2' 3-15/16" 6-11/16" for widths under 1' 6" <i>Custom size panics available on request to match existing installations</i>	628 710 BLK	Satin Anodized Aluminum Dark Bronze Anodized Black Insert to match door finish is standard.	All
SP14 Push Pad 	6-11/16" 6-11/16" 1-5/16" If the doors are electric, the SP14 must be 9"	628 710 BLK	Satin Anodized Aluminum Dark Bronze Anodized Black Insert to match door finish is standard.	All
SP13/ABU Panic Edge Protector 	1-9/16" 6-11/16" 1-5/16"	628	Satin Anodized Aluminum Used to deflect hinge side impact to panic device	All
   				
PF200 Flush Panic Exit Device 	Two Sizes Available – Based on Door Width 4-3/8" 5/8" 1/8" Closed Open 24" for widths of 2' 5-1/16" and wider 14" for widths of 1' 7" thru 2' 5"	628 710 BLK	Satin Anodized Aluminum Dark Bronze Anodized Black Insert to match door finish is standard.	All











Total Door SYSTEMS
Global Leader in Integrated Access Technology®

Grip Mechanisms

Total Door Systems' grip mechanisms and trim offer convenience, simplicity in design and resistance to extreme abuse and forced entry. Ideal where the design demands functional trim that compliments or blends with its surroundings or where the doors and hardware will be exposed to consistent wear and tear, at schools for example.

- Fire rated up to 3 hours
- ADA compliant
- Available in all functions and electric unlatching
- Operates with any standard A/R cam mortise cylinder
- No external fasteners; trim can't loosen or fall off
- Factory installed as an integral part of the Total Door System

Available Grip

Device	Dimensions				Finish Color	Available Finishes	Fire Ratings
<div></div>							
<div>M32 Grip</div> 	1-7/8" 1-5/8" clearance	1"	2-11/16"	5-3/4"	628 710 28M BLK	Satin Anodized Aluminum Dark Bronze Anodized Mirror Anodized Black	All
<div>M33 Grip</div> 	1" 1-1/32" clearance	1"	2-11/16"	5-3/4"	628 710 28M BLK	Satin Anodized Aluminum Dark Bronze Anodized Mirror Anodized Black	All
<div>M35 Grip</div> 	2-1/4" 1-5/8" clearance	1/2"	2-11/16"	5-3/4"	628 710 28M BLK	Satin Anodized Aluminum Dark Bronze Anodized Mirror Anodized Black	All
<div>M52 Push</div> 	3/16"	1"	2-11/16"	5-3/4"	628 710 BLK	Satin Anodized Aluminum Dark Bronze Anodized Black	All











Section 1 - Configurations / Functions: Lever Mechanisms and Trim

1.06

Total Door Systems' lever locking mechanisms are an integral part of the assembly and are factory installed.

- Fire rated up to 3 hours
- ADA compliant
- Available in all functions and electric functions
- Operates with any standard cam mortise cylinder
- Factory installed as an integral part of the Total Door System

Available Lever Mechanism Trim

Device	Dimensions				Finish Color	Available Finishes	Fire Rating
<div></div>							
60 Lever 	2-3/4"	5-3/16"	11/16"	11/16"	605 606 629 630 710 BLK	Bright Brass Satin Brass Bright Stainless Satin Stainless Dark Bronze Black	All
82 Lever 	2-1/2"	4-15/16"	1"	11/16"	605 606 629 630 710 BLK	Bright Brass Satin Brass Bright Stainless Satin Stainless Dark Bronze Black	All
83 Lever 	2-3/4"	5-1/8"	1"	11/16"	605 606 629 630 710 BLK	Bright Brass Satin Brass Bright Stainless Satin Stainless Dark Bronze Black	All
84 Lever 	2-5/8"	5-1/8"	1"	11/16"	605 606 629 630 710 BLK	Bright Brass Satin Brass Bright Stainless Satin Stainless Dark Bronze Black	All
Q19 Escutcheon 	1/4"	1-3/16"	6-3/4"		605 606 629 630 710 BLK	Bright Brass Satin Brass Bright Stainless Satin Stainless Dark Bronze Black	All
E29 Escutcheon for Electric Access 	1/4"	7-5/8"	6-3/4"		605 606 629 630 710 BLK	Bright Brass Satin Brass Bright Stainless Satin Stainless Dark Bronze Black	All

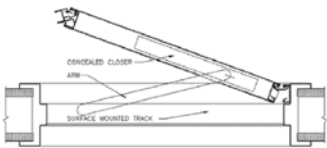
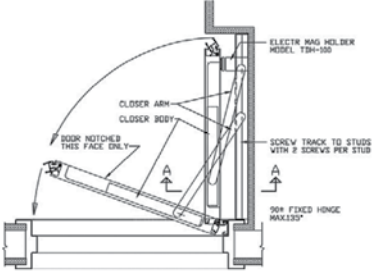


1.07

Section 1 - Configurations / Functions: Closing Devices

Total Door Systems offers closers to meet any swing application.

- Fire rated up to 3 hours
- ADA compliant

Available Closers

	Maximum Degrees	Mounting Location	Application	Comments
TDC 96 	135	Concealed in door	Interior	<ul style="list-style-type: none"> • Track doubles as a head stop • 1' 6" minimum door body width • Factory installed as an integral part of the Total Door System
TDC 96P - pocket 	135	Concealed in door	Interior/pocket	<ul style="list-style-type: none"> • Track mounted to wall • 1' 6" minimum door body width • Factory installed as an integral part of the Total Door System
TDC 5051 	180	Door or top jamb	Interior/exterior	<ul style="list-style-type: none"> • Standard mount (pull side) 90-140° • Top Jamb mount (push side) 120° • Parallel mount (push side) 100°, 140° or 180° • CUSH & CUSH-H (push side) available parallel arm only, with a maximum 110° • Pull side N/A on double egress • 2' 0" minimum door body width
TDC 8907 	180	Wall	Interior/pocket	<ul style="list-style-type: none"> • Closer body mounted in pocket, arm on door • 2' 0" minimum door body width

The Total Package

Total Door Systems SafeFrame® provides a complete integrated smoke containment system that exceeds the testing and rating requirements for elevator hoistways and eliminates the need for elevator lobbies.

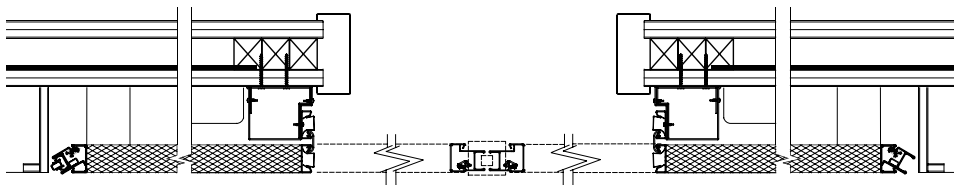
Streamlined in design, the Total Door SafeFrame® eliminates the need for frame construction and is perfectly matched to the architect's design vision to create a complete smoke containment system. No special wall construction or building of lobbies is needed – and the Total Door SafeFrame® is shipped with the door so you get the complete system all in one delivery.

You get a complete door and frame system with:

- SafeFrame® and integrated door all in one shipment
- Built-in concealed magnetic holder with armored loop directly tied into each floor's smoke detector
- Surface mounted knock down sub-buck frame to mount directly to wall face
- Fire and smoke rated system
- Complete system tested to meet UL 1784 without an artificial bottom seal
- Meets ASME A17.1 elevator code requirements
- Certified to BHMA A156.32
- Meets IBC requirements for air leakage of assemblies. Less than 3 cfm per s.f. of door at .10 inch (24.9 Pa) of water column pressure.

We offer single door and paired door applications.

Now, with our SafeFrame®, Total Door manufactures a fully integrated door system that stays true to your design vision and building needs. The SafeFrame® is a truly integrated system that is ready to be installed with no additional construction. Now more than ever, we have your back.



Ratings up to 90 minutes.



1.09

Section 1 - Configurations / Functions: Door Functions

Title	Function	Dogging	Description
Passage	L01 G01 LP01 GP01 LFP01 GFP01	CD&D CD&D CD CD	Door is operated from either side at all times.
Egress	L01.5 G01.5 LP01.5 GP01.5 LFP01.5 GFP01.5	CD&D CD&D CD CD	Door is operated by inside trim device only. Outside trim is always inoperative. No cylinder.
Privacy (Lever)	L02		Door is operated from either side except when outside is locked by inside turn piece. Operation of inner lever unlocks both sides. Also unlocked by turn piece or emergency key outside.
Privacy (Push/Pull)	G02		Door is operated from either side, except when both sides are locked by inside turn piece. Door unlocked by turn piece inside or emergency key outside.
Patio	L02P G02P		Door is operated from either side except when both sides are locked by inside turn piece.
Entry (Apartment or Office Suite)	L04 G04		Door is operated from either side except when outside is locked by turn piece inside or key outside. Inside trim is always operational.
Classroom	L05 G05 LP05 GP05 LFP05 GFP05	CD&D CD&D CD CD	Door is operated from either side except when outside is locked by key from outside. Inside trim is always operational.
Storeroom	L07 G07 LP07 GP07 LFP07 GFP07	CD&D CD&D CD CD	Door is operated from either side except when outside is locked by key outside; key cannot be withdrawn in unlocked position. Inside trim is always operational.

NOTE: 1) **L** = Lever **G** = Grip **P** = Standard Panic **FP** = Flush Panic **D** = Dogging **CD** = Cylinder Dogging
 2) Dogging function is not permitted on rated doors
 3) Panic exit devices are approved for use on all rated Total Door Systems

Title Function	Function	Description
Apartment (Building Entry)	L09 G09	Door is operated from either side except when outside is locked by key outside or key inside. Inside trim is always operational.
Dormitory or Convalescent	L13	Door is operated from either side except when outside is locked by key outside or turn-piece inside. Operation of inside lever automatically unlocks outside. Door also unlocks by turn-piece or key. (Not available with grips.)
Store Door	L14 G14	Door is operated from either side except when locked by key from either side.
Deadlock	L17 G17	Door is operated from either side except when both sides are locked by key outside or turn-piece inside.
Deadlock	L18 G18	Door is operated from either side except when both sides are locked by key outside.

NOTE: 1) **L** = Lever **G** = Grip **P** = Standard Panic **FP** = Flush Panic **D** = Dogging **CD** = Cylinder Dogging
 2) Dogging function is not permitted on rated doors
 3) Panic exit devices are approved for use on all rated Total Door Systems

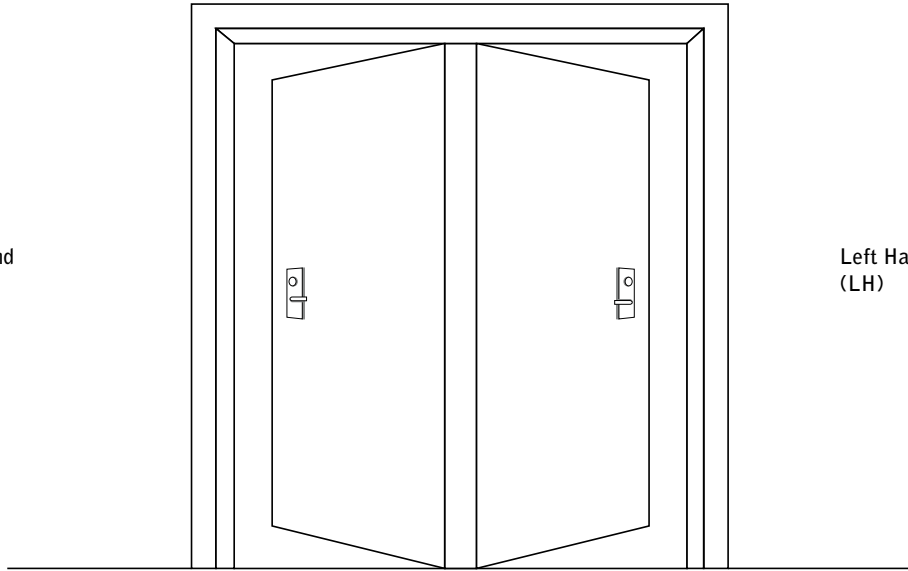
1.10

Section 1 - Configurations / Functions:

Door Handing

Normally the outside of a door is the side from which it may be opened by a key – or the “key side”. The hardware, therefore, effects the hand of the door. To visualize this, examine the layout below of a possible door arrangement from a corridor to four separate offices. The corridor would be the outside because it is the key side.

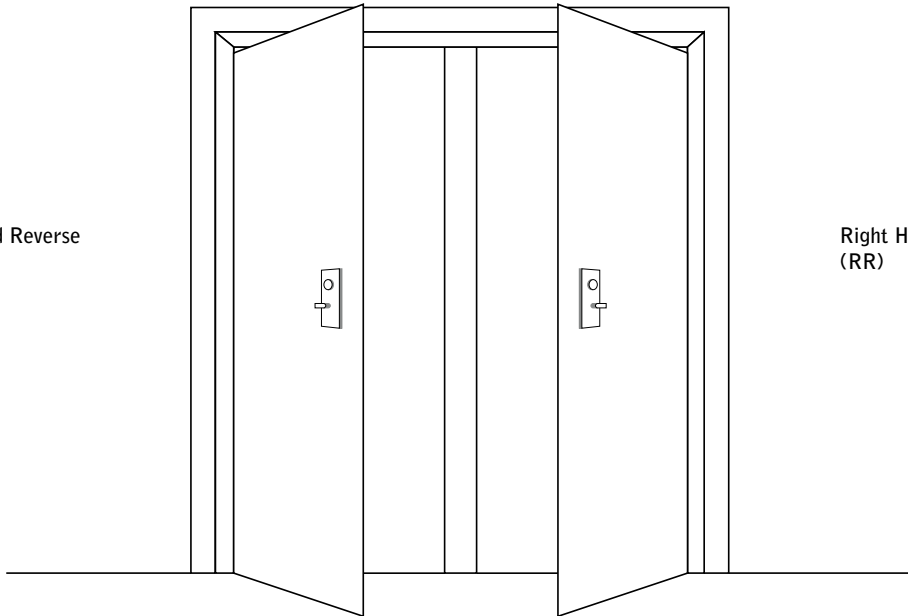
Right Hand
(RH)



Left Hand
(LH)

If the door swings away from the viewer, the hand is a regular hand,
i.e., left hand (LH) or right hand (RH).

Left Hand Reverse
(LR)



Right Hand Reverse
(RR)

If the door swings towards the viewer, the door is reverse swing,
i.e., left hand reverse (LR) or right hand reverse (RR).

Section 2:

Finishes & Options



Finishes & Options

Finishes

Paint	2.01
Architectural Overlay	2.02
Architectural Metal	2.03
Veneer	2.04
Custom Finishes (requires feasibility study)	2.05

Options

Lite Kits & Glazing	2.06
Gasketing – Smoke and Weather	2.07
Plates – Kick, Mop, Armor & Edge Guards	2.07
Removable Mullions	2.07

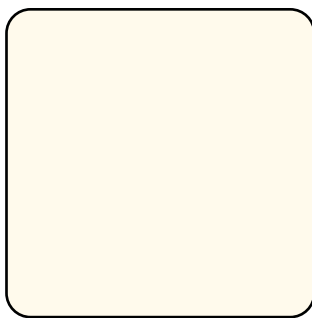
Electric Door Options

Electric Doors	2.08
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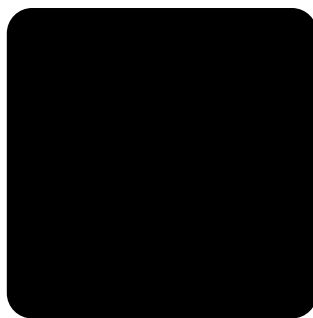
Great design requires a full range of options. Our integrated door systems can accommodate nearly any finish. The only limitation is your imagination. **What do you want to create today?**

Whether it's prime paint or custom matched color, we take pride in our approach. Our custom colors are created using a two-part catalyzed polyurethane, and our architectural colors are matched in our paint kitchen then baked on for extreme durability.

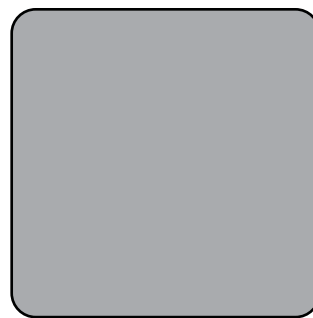
Due to variations in printers, samples shown may vary slightly from the actual paint color. Contact the factory to request samples.



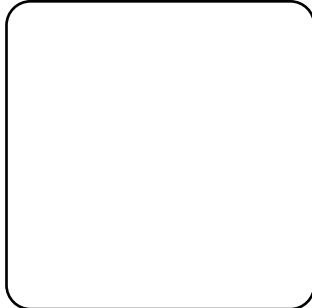
White Sand



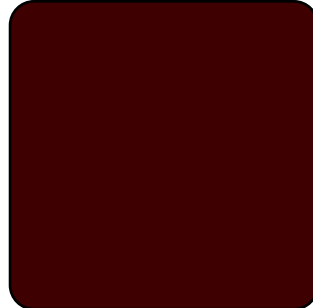
Black



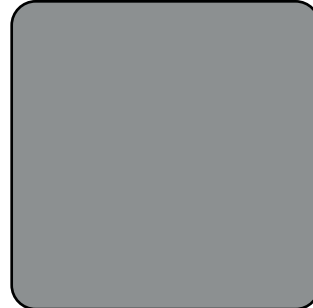
Gray



Pure White



Dark Bronze



Silver Metallic

**This swatch does not reflect
the true metallic appearance.*

Do not use this page to make final selections.

Section 2 - Finishes & Options: Architectural Overlay

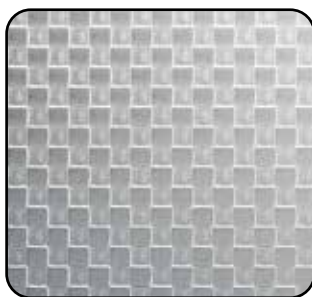
Total Door Systems uses architectural overlays that are durable and realistic. They are applied with a pressure sensitive adhesive and air removal system backing for a smooth finish and beautiful presentation that completes your design.

And because the overlays are produced using a next-generation process, the final appearance is nearly identical to that of real wood, leather or metal, even when stretched to cover corners and curves. Another benefit? The architectural overlays we use are solvent/chemical resistant, anti-bacterial and anti-mold, colorfast, washable – even scrubbable, as they are abrasion-resistant. Incredibly durable, architectural overlays last longer, are easy to change for a new look, and dramatically reduce the amount of waste that would go to landfill, making architectural overlays a more sustainable option.



Do not use this page to make final selections.

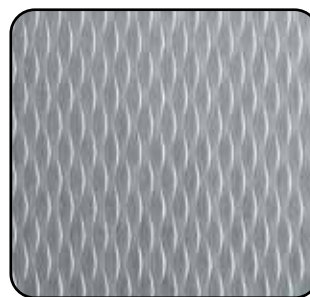
We believe design should be set free to inspire – not limited to a few manufacturer's choices. Total Door Systems offers a broad range of architectural metal finishes to complete your vision and create striking, yet functional door systems. Beauty and durability in one integrated system. If you don't see what you want here, please send a sample to the factory for a feasibility study. All metals must be 22 gauge.



Squares



Non-Directional



2-WL



3-ND



Sand Tex



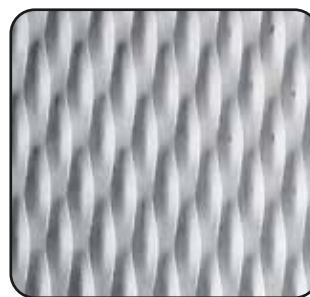
Linen



Random Swirl



1SLG



5-WL



60 LTH



RTP



XTP

Do not use this page to make final selections.

Section 2 - Finishes & Options: Veneer

Our popular wood veneers offer design flexibility and beauty. And because we can customize our doors to seamlessly blend with the rest of the room, we can ensure that the focus stays on your design.



Since wood is a natural material, the grain and color will vary. Total Door Systems cannot guarantee that the actual product color or grain pattern will duplicate any of these examples. These examples simply illustrate the basic color and grainfill of veneer and variations will occur from one finished product to another. Samples must be submitted for approvals before ordering.

Do not use this page to make final selections.

Custom Finishes (requires feasibility study)

Custom finishes require a feasibility study. A sample and specifications must be sent to the factory:

Attn: Orders
Total Door Systems
6145 Delfield Dr.
Waterford, MI 48329

- There is a two-week minimum period, after sample receipt, required for proper testing.
- You will be notified of the approval status by Total Door once feasibility has been completed.
- Please include the Project Name in all correspondence.



Total Door SYSTEMS
Global Leader in Integrated Access Technology®

Section 2 - Finishes & Options:
Lite Kits & Glazing

All lite kits are made of 16 gauge cold rolled galvanized steel with T.I.G. welded mitered corners. Finish is baked-on poly. Lites are available for all glass thicknesses up to 1-1/8". Lite kits project only 1/16" beyond the door skin.

All lite kits may be glazed with fire rated ceramic glazing, tempered glass or non-rated laminated safety glass.

Label	Max. in² Visible Glass	Max. Number of Lites	Max. Visible Glass Widths	Max. Visible Glass Lengths
FIRELITE PLUS & NT				
A (3 hr)	100"	No Limit	12"	33"
B (1-1/2 hr)	2034"	No Limit	36"	56"
C (3/4 hr)	3204"	No Limit	36"	89"
20 Minute	3204"	No Limit	36"	89"

Note: Temperature Rise Labels: 100 in² maximum for all labels, 12" maximum visible width, 33" maximum visible height.

Door size may limit maximum visible height and width.



FG Lite



G Lite



GG Lite



V Lite



N1 Lite



NN Lite



N Lite

Note: For custom location and size contact the factory. ADA requires the lite kit location to be 43" from finish floor to bottom of visible glass.

Gasketing – Smoke and Weather

- All gasketing is U.L. approved for fire doors and is identical whether used for sound, weather or smoke control purposes. Gasketing is included in all door orders.
- Head gasketing is shipped loose and must be field applied. Locking channel gasketing is factory installed on all doors.

Plates (Kick, Mop, Armor) and Edge Guards

- All of the above plates are bonded to the door face and wrapped around the door edge to provide a mechanical interlock to the door edge. Kick, mop and armor plates use no screws or other visible fasteners.
- Edge guards are riveted in the factory. Installation is included in the published price.
- Standard finish is 630 satin stainless. Finish surfaces are protected by a heavy gauge adhesive plastic film.

Removable Mullions

- Use in high security, high abuse, non-rated openings. For example, exterior doors.
- Removable mullions are only available on non-rated doors up to 10'.

Electric Door Options

Electric Doors

Remotely controlled electric doors are available as follows:

- Single, pair or double egress
- A, B, C or 20 minute label or non-rated
- Remote unlatching for use with automatic door operators
- Remote unlocking - fail safe or fail secure
- Delayed egress - standard panic only

Remotely Controlled Electrical Doors

The following is an attempt to explain in layman's terms the operation and function of electrically controlled Total Door Systems.

I. Basic Components

A. Power transfer devices from the frame to the door.

This power transfer is accomplished by means of a 4 wire conductor which is concealed and inaccessible when the door is closed. This device is a part of the system provided by Total Door Systems and is installed and pre-wired at the factory. The 4 wire conductor carries power to the solenoid and, if desired, signals when the solenoid armature is fully seated, indicating that unlatching or locking/unlocking of the door has been completed.

B. Internal door wiring is by Total Door Systems.

C. Solenoid: The power surge solenoid is used in all electric Total Door Systems. Two very important features of this solenoid are:

1. The force exerted by the solenoid at the beginning of its stroke is approximately 200 ounces (12-1/2 lbs.). This force is approximately four times larger than necessary for operation.
2. After completing its work and when fully seated, the armature actuates a switch to transfer from a pulling force of 6 amps to a holding force of 1/2 amp. This switch accomplishes two things. It prevents excessive heat build-up in the door when under constant power and it permits the coil to signal the system that it has completed its work. For example, in automatic door operation, the automatic door cycle does not commence until the switch signals that unlatching has been completed.

D. Power Supply #210: A 24 volt D.C. 6 amp (120VA) power supply operating on 110 volts A.C. Power Supply #210 is included from Total Door Systems.

E. Design Limitations: Electric operation can be combined with levers and/or standard panics.

F. Control: All electric doors' solenoids lock, unlock or unlatch, based upon being powered or not. Any device which closes or opens a switch will achieve the doors' intended function. This device can be a keyed wall cylinder switch, a card reader, P.I.N. pad, a voice recognition system, fire alarm, time clock, motion detector, carpet, etc...

G. Label Approval: All of the above devices and combinations are listed as assemblies for A, B, C and 20 minute rated Total Door Systems.

Remotely Controlled Electrical Doors

II. Definitions

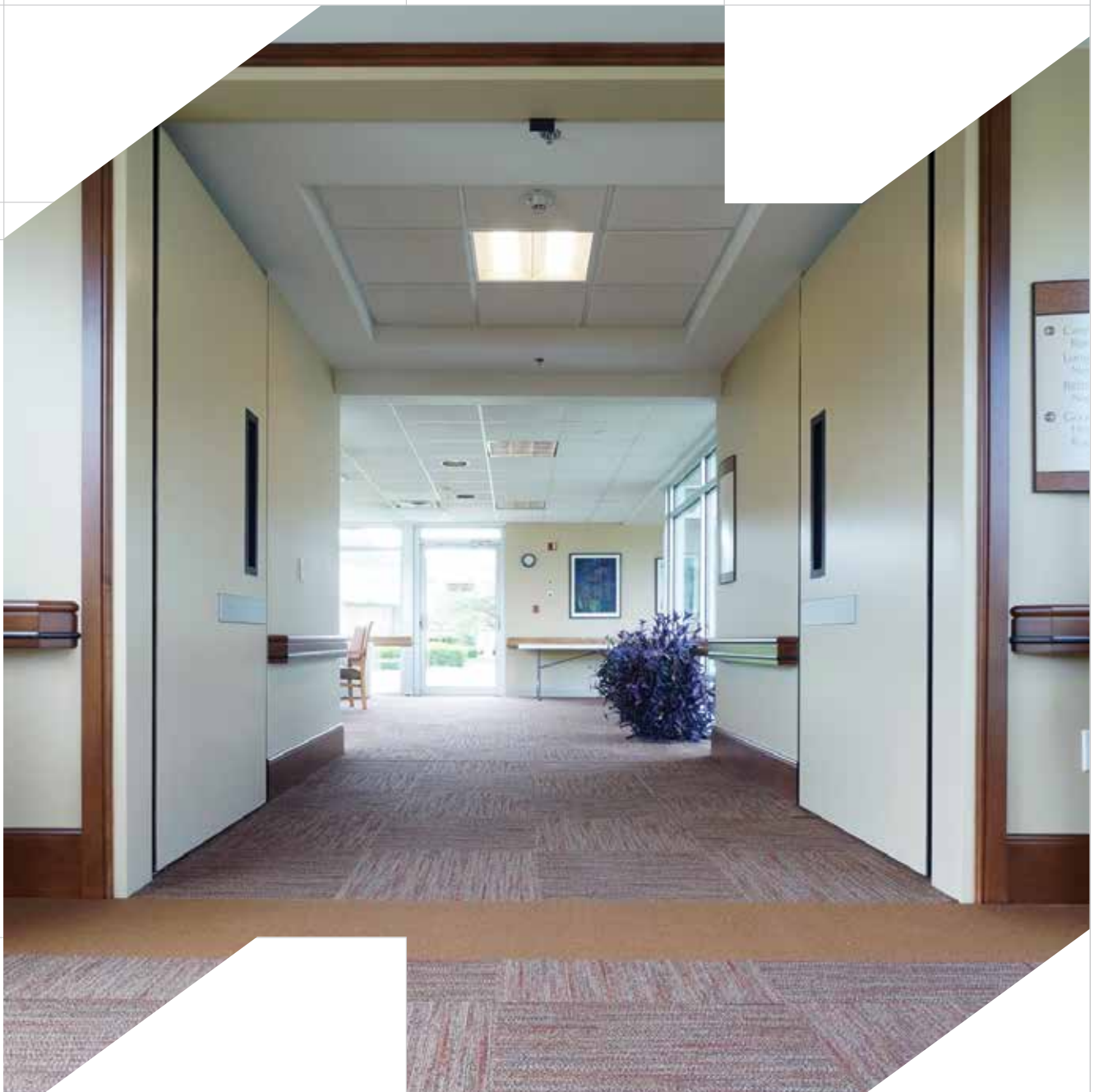
- A. **Fail Secure: (E SEC)** Power interruption, intentional or accidental, puts the mechanism into a locked mode. Use of the fail secure control must not violate local codes. One Model #210 power supply may handle two doors.
- B. **Fail Safe: (E SAF)** Power interruption, intentional or accidental, puts the mechanism into an unlocked mode. One Model #210 power supply may handle two doors.
- C. **Remote Unlatching: (E UNL)** Power to the solenoid unlatches the door as long as the power is on. Power off allows the door to revert to its previous mechanical mode. One Model #210 power supply may handle two doors.
- D. **Electric Panic: (E PAN)** Power to the solenoid locks the panic as long as the power is on. Power off allows activation of the panic to unlatch the door.

III. Examples (allowable functions vary by code jurisdiction)

- A. **Fail Secure: (E SEC) Security room door** - Doors are electrically unlocked. Power interruption puts the door into the locked mode.
- B. **Fail Safe: (E SAF) Stair hall door** - Doors are electrically locked from the stair side. Power interruption puts the door into the unlocked mode. Momentary access is available by key, P.I.N. pad, card reader, or other.
- C. **Remote Unlatching: (E UNL) Doors with auto operators** - The floor mat, wall switch, or motion sensor sends power to the door solenoid. After the door unlatches, a signal is sent to the operator to open the door.
- D. **Electric Panic: (E PAN) Psychiatric, detention facility** - The panic is electronically locked. This will work with a delayed egress with the addition of a required REX switch. Interruption of power unlocks the panic.

Section 3:

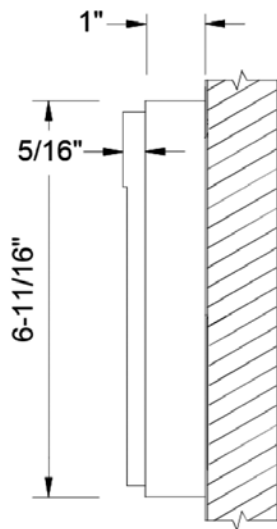
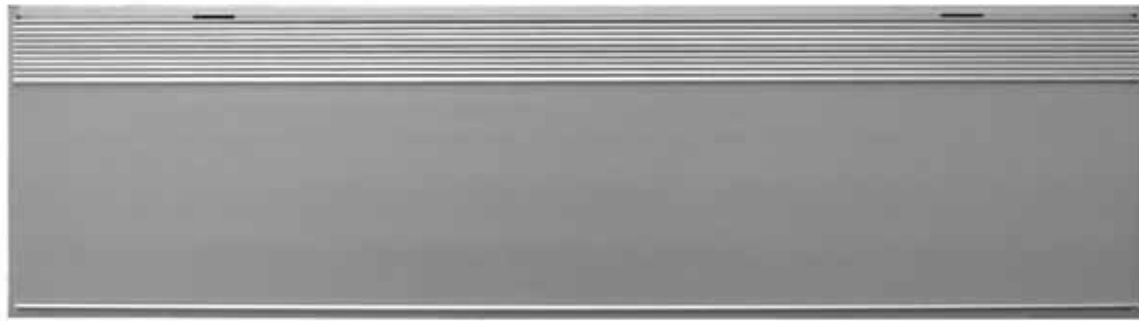
Door System Hardware



P14 / P14STP Exit Device	3.01
SP14 Push Pad	3.02
PF 200 Flush Exit Device	3.03
M32	3.04
M33	3.05
M35	3.06
M52	3.07
Lever 60	3.08
Lever 82	3.09
Lever 83	3.10
Lever 84	3.11
TDC 96 Concealed Closer	3.12
TDC 96P Concealed Closer	3.13
TDC 5051 Closer	3.14
TDC 8907 Pocket Closer	3.15
TDH 100 Electromagnetic Holder	3.16
TDH 200 Electromagnetic Holder	3.17
Continuous Hinge	3.18
Continuous Locking Channel	3.19

Section 3 - Hardware:
P14 / P14STP Exit Device

3.01

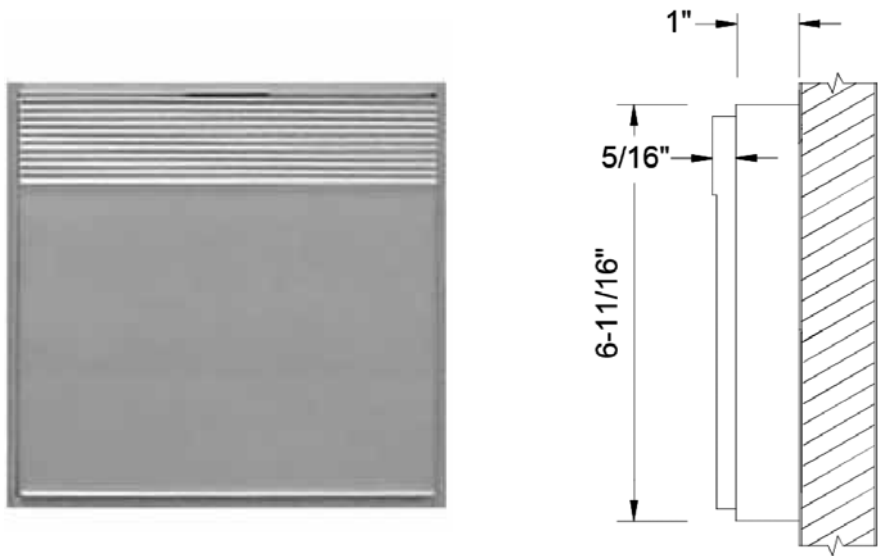


SPECIFICATIONS

Lengths	<ul style="list-style-type: none"> • Standard 24" – P14STP • Full door width – P14 (custom)
Height	<ul style="list-style-type: none"> • 6-11/16"
Projection	<ul style="list-style-type: none"> • 1-5/16"
Centerline from bottom of door	<ul style="list-style-type: none"> • 39-9/16" • 36-3/4"
Finishes	<ul style="list-style-type: none"> • 628 Satin Anodized Aluminum • 710 Dark Bronze Anodized • Black • Insert to match door body • Architectural metal inserts: 629, 630, 707, 667, 710
Dogging Options	<ul style="list-style-type: none"> • Mechanical • Electric – E-UNL

Exit Device

- ADA compliant
- Fire rated up to 3 hours
- Available with levers, operating grips or exit only
- Electrical functions available
- Factory installed as an integral part of the Total Door System



SPECIFICATIONS

Lengths	<ul style="list-style-type: none">Lengths 6-11/16" – standard9" – electric functions
Height	<ul style="list-style-type: none">6-11/16"
Projection	<ul style="list-style-type: none">1-5/16"
Centerline from bottom of door	<ul style="list-style-type: none">39-9/16"36-3/4"
Finishes	<ul style="list-style-type: none">628 Satin Anodized Aluminum710 Dark Bronze AnodizedBlackInsert to match door bodyArchitectural metal inserts: 629, 630, 707, 667, 710
Dogging Options	<ul style="list-style-type: none">MechanicalElectric – E-UNL

Push Pad

- ADA compliant
- Fire rated up to 3 hours
- Available with levers, operating grips or exit only
- Electrical functions available
- Factory installed as an integral part of the Total Door System

PF 200 Flush Exit Device

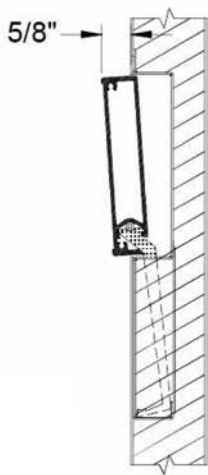
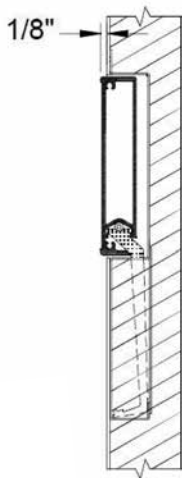
3.03



Door Closed



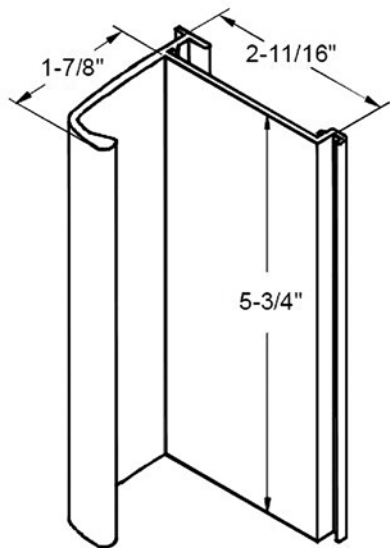
Door Open

**SPECIFICATIONS**

Lengths	<ul style="list-style-type: none"> • 24" For width of 2'5" and wider • 14" For width of 1'7" to 2'4-15/16"
Height	<ul style="list-style-type: none"> • 4-3/8"
Projection	<ul style="list-style-type: none"> • 5/8" Closed 1/8" Open
Centerline from bottom of door	<ul style="list-style-type: none"> • 39-9/16" • 36-3/4"
Finishes	<ul style="list-style-type: none"> • 628 Satin Anodized Aluminum • 710 Dark Bronze Anodized • Black • Insert to match door body • Architectural metal inserts: 629, 630, 707, 667, 710

Flush Exit Device

- ADA compliant
- Fire rated up to 3 hours
- Available with levers, operating grips or exit only
- Only electrical unlatching function available
- Factory installed as an integral part of the Total Door System

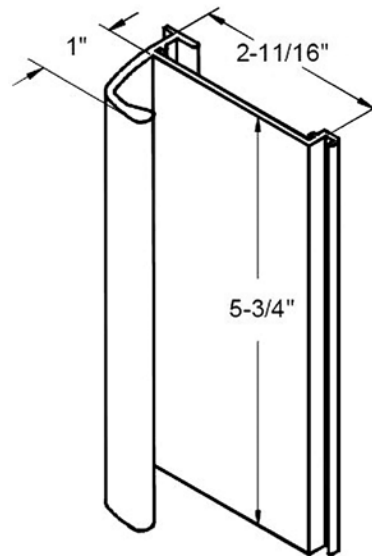


SPECIFICATIONS

Width	• 2-11/16"
Height	• 5-3/4"
Projection	• 1-7/8"
Centerline from bottom of door	• 39-9/16" • 36-3/4"
Finishes	• 628 Satin Anodized Aluminum • 710 Dark Bronze Anodized • 28M Mirror Anodized • Black

Operating Pull/Push Mechanisms and Trim

- ADA compliant
- Fire rated up to 3 hours
- Available in all standard mechanical functions and electrical unlatching function
- No exterior fasteners; trim can't loosen or fall off
- Operate with any standard A/R cam mortise cylinder
- Factory installed as an integral part of the Total Door System

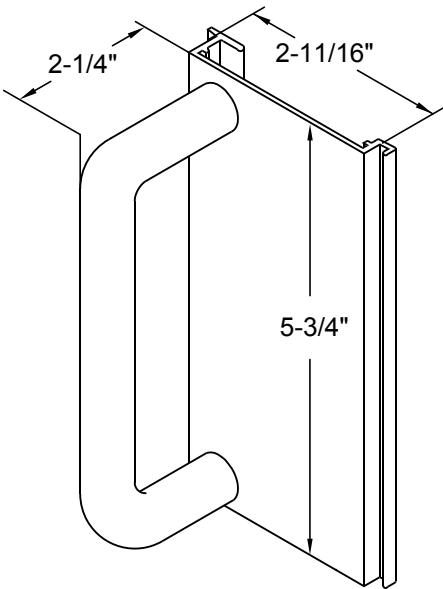


SPECIFICATIONS

Width	• 2-11/16"
Height	• 5-3/4"
Projection	• 1"
Centerline from bottom of door	• 39-9/16" • 36-3/4"
Finishes	• 628 Satin Anodized Aluminum • 710 Dark Bronze Anodized • 28M Mirror Anodized • Black

Operating Pull/Push Mechanisms and Trim

- ADA compliant
- Fire rated up to 3 hours
- Available in all standard mechanical functions and electrical unlatching function
- No exterior fasteners; trim can't loosen or fall off
- Operate with any standard A/R cam mortise cylinder
- Factory installed as an integral part of the Total Door System

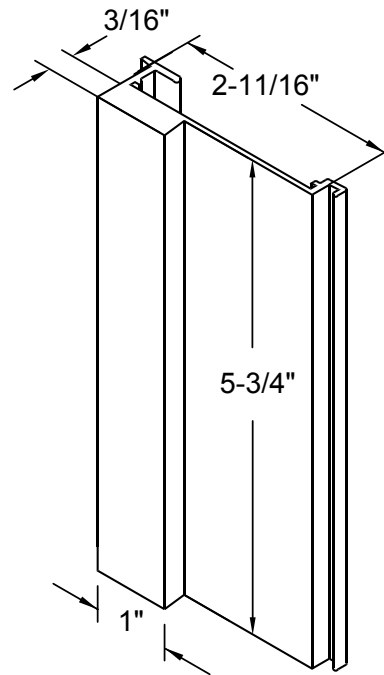


SPECIFICATIONS

Width	• 2-11/16"
Height	• 5-3/4"
Projection	• 2-1/4"
Centerline from bottom of door	• 39-9/16" • 36-3/4"
Finishes	• 628 Satin Anodized Aluminum • 710 Dark Bronze Anodized • 28M Mirror Anodized • Black

Operating Pull/Push Mechanisms and Trim

- ADA compliant
- Fire rated up to 3 hours
- Available in all standard mechanical functions and electrical unlatching function
- No exterior fasteners; trim can't loosen or fall off
- Operate with any standard A/R cam mortise cylinder
- Factory installed as an integral part of the Total Door System



SPECIFICATIONS

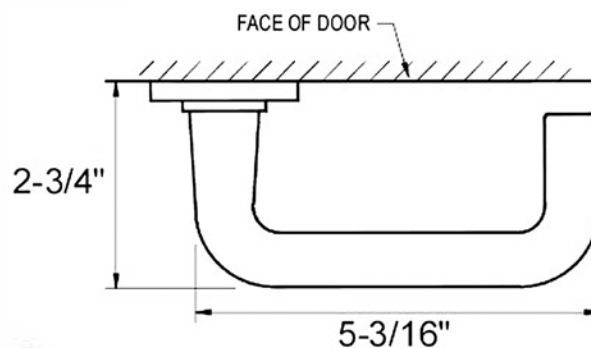
Width	• 2-11/16"
Height	• 5-3/4"
Projection	• 3/16"
Centerline from bottom of door	• 39-9/16" • 36-3/4"
Finishes	• 628 Satin Anodized Aluminum • 710 Dark Bronze Anodized • Black

Operating Pull/Push Mechanisms and Trim

- ADA compliant
- Fire rated up to 3 hours
- Available in all standard mechanical functions and electrical unlatching function
- No exterior fasteners; trim can't loosen or fall off
- Operate with any standard A/R cam mortise cylinder
- Factory installed as an integral part of the Total Door System

3.08

Section 3 - Hardware: Lever 60

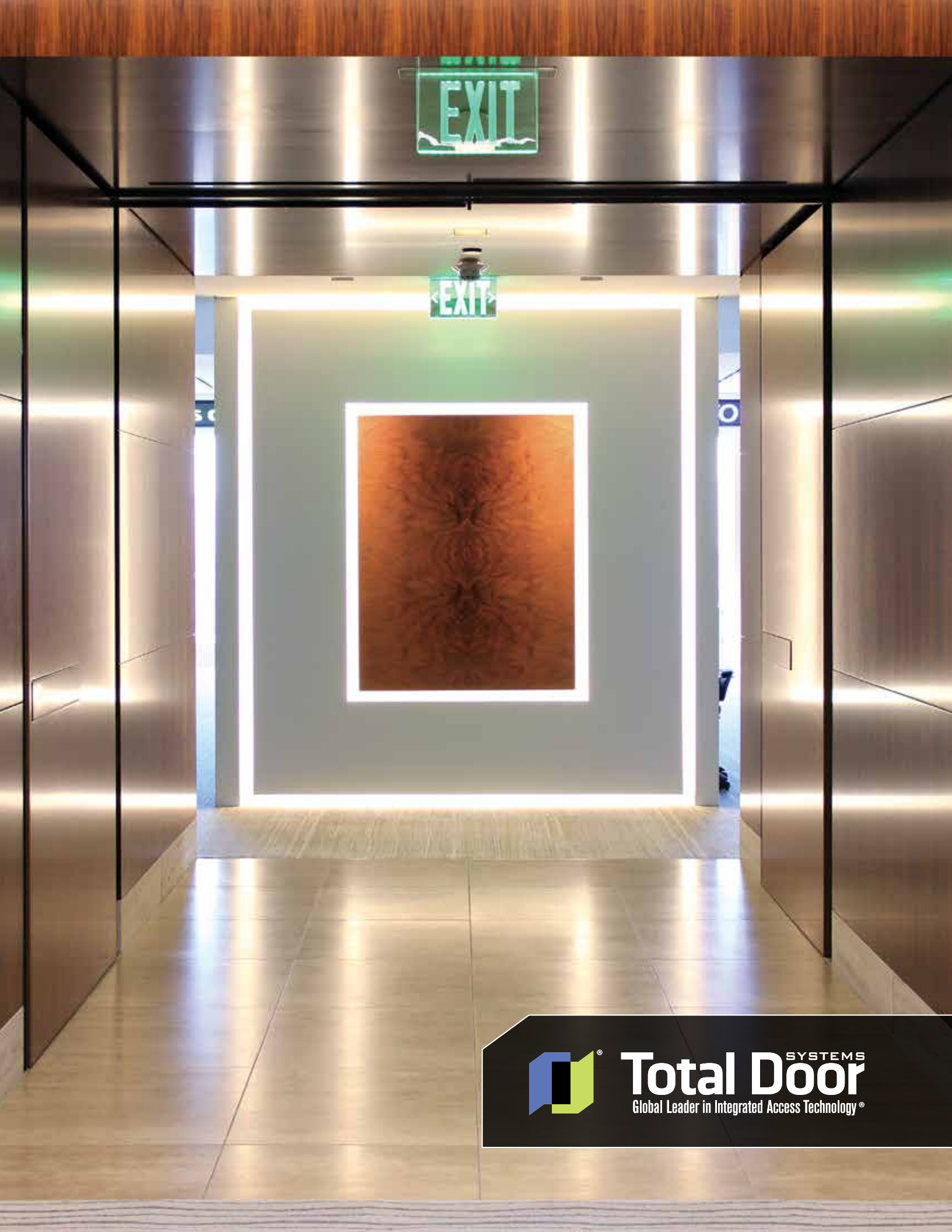


SPECIFICATIONS

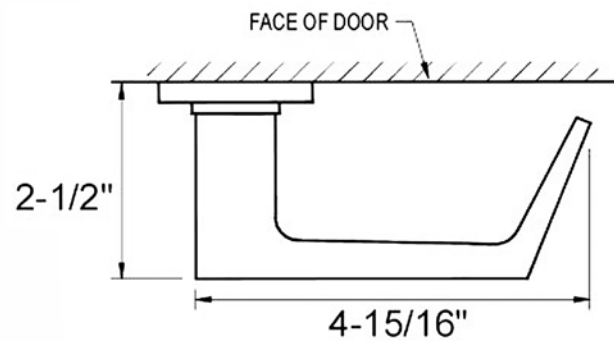
Lengths	<ul style="list-style-type: none"> • 5-3/16"
Height	<ul style="list-style-type: none"> • 11/16"
Projection	<ul style="list-style-type: none"> • 2-3/4"
Centerline from bottom of door	<ul style="list-style-type: none"> • 39-9/16" • 36-3/4"
Finishes	<ul style="list-style-type: none"> • 605 Bright Brass • 606 Satin Brass • 629 Bright Stainless Steel • 630 Satin Stainless Steel • 710 Dark Bronze • Black
Dogging Options	<ul style="list-style-type: none"> • Electric – E-UNL

Lever Mechanisms

- ADA compliant
- Fire rated to 3 hours
- Operate with any standard B/C4 cam mortise cylinder
- Available in all functions and electric functions



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SPECIFICATIONS

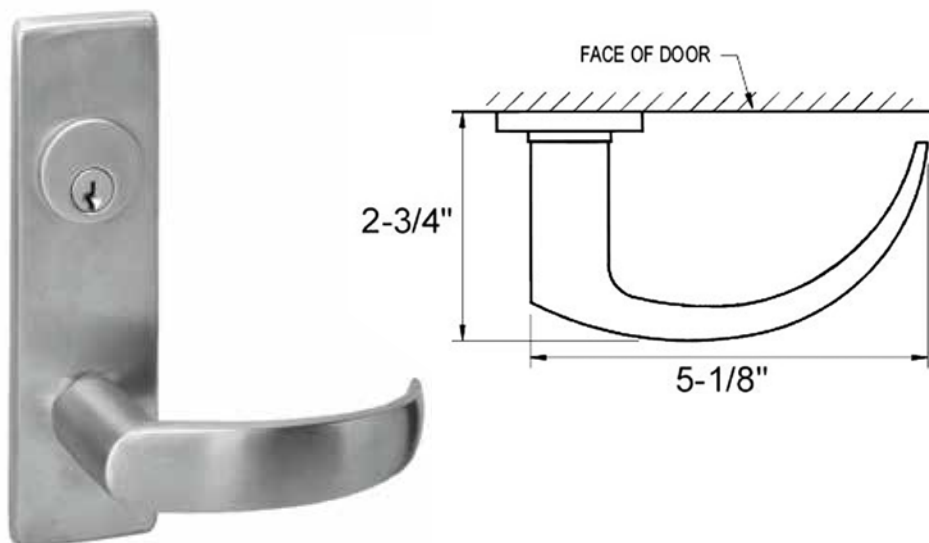
Lengths	<ul style="list-style-type: none"> • 4-15/16"
Height	<ul style="list-style-type: none"> • 11/16"
Projection	<ul style="list-style-type: none"> • 2-1/2"
Centerline from bottom of door	<ul style="list-style-type: none"> • 39-9/16" • 36-3/4"
Finishes	<ul style="list-style-type: none"> • 605 Bright Brass • 606 Satin Brass • 629 Bright Stainless Steel • 630 Satin Stainless Steel • 710 Dark Bronze • Black
Dogging Options	<ul style="list-style-type: none"> • Electric – E-UNL

Lever Mechanisms

- ADA compliant
- Fire rated to 3 hours
- Operate with any standard B/C4 cam mortise cylinder
- Available in all functions and electric functions

3.10

Section 3 - Hardware: Lever 83

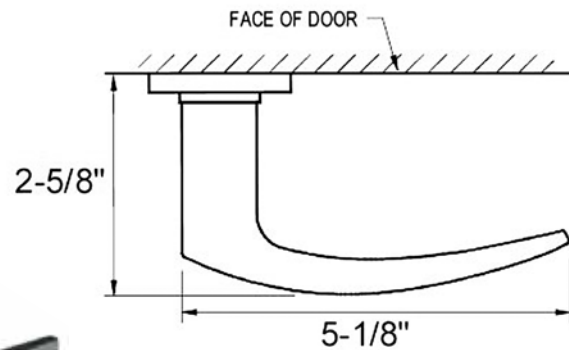


SPECIFICATIONS

Lengths	<ul style="list-style-type: none"> • 5-1/8"
Height	<ul style="list-style-type: none"> • 11/16"
Projection	<ul style="list-style-type: none"> • 2-3/4"
Centerline from bottom of door	<ul style="list-style-type: none"> • 39-9/16" • 36-3/4"
Finishes	<ul style="list-style-type: none"> • 605 Bright Brass • 606 Satin Brass • 629 Bright Stainless Steel • 630 Satin Stainless Steel • 710 Dark Bronze • Black
Dogging Options	<ul style="list-style-type: none"> • Electric – E-UNL

Lever Mechanisms

- ADA compliant
- Fire rated to 3 hours
- Operate with any standard B/C4 cam mortise cylinder
- Available in all functions and electric functions



SPECIFICATIONS

Lengths	<ul style="list-style-type: none"> • 5-1/8"
Height	<ul style="list-style-type: none"> • 11/16"
Projection	<ul style="list-style-type: none"> • 2-5/8"
Centerline from bottom of door	<ul style="list-style-type: none"> • 39-9/16" • 36-3/4"
Finishes	<ul style="list-style-type: none"> • 605 Bright Brass • 606 Satin Brass • 629 Bright Stainless Steel • 630 Satin Stainless Steel • 710 Dark Bronze • Black
Dogging Options	<ul style="list-style-type: none"> • Electric – E-UNL

Lever Mechanisms

- ADA compliant
- Fire rated to 3 hours
- Operate with any standard B/C4 cam mortise cylinder
- Available in all functions and electric functions

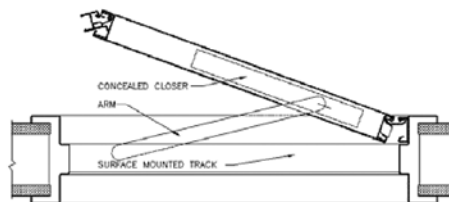


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3.12

Section 3 - Hardware:

TDC 96 Concealed Closer



TDC 96 Standard Swing Application

SPECIFICATIONS

Degree of Swing	Up to 135°
Minimum Door Size	1'6"
Adjustability	Latching, Closing & Cush Stop
Mounting Location	Mortised in top rail of door
Application Type	Pocket, Non-pocket

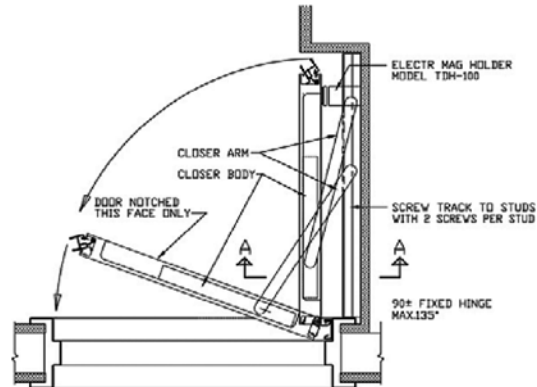
Concealed Closer

- Fire rated to 3 hours
- Adjustable to sizes 1 through 5
- Retrofit to existing frames without mortising the frame
- Arm and track hidden when door is closed
- Track and arm are color matched to door's hinge and locking channel
- Improved ADA compliance – cam action is 60% more efficient than a standard rack & pinion closer

Note: For abusive applications use the TDC5051 closer

Section 3 - Hardware: TDC 96P Concealed Closer

3.13



TDC 96P Pocketed Application

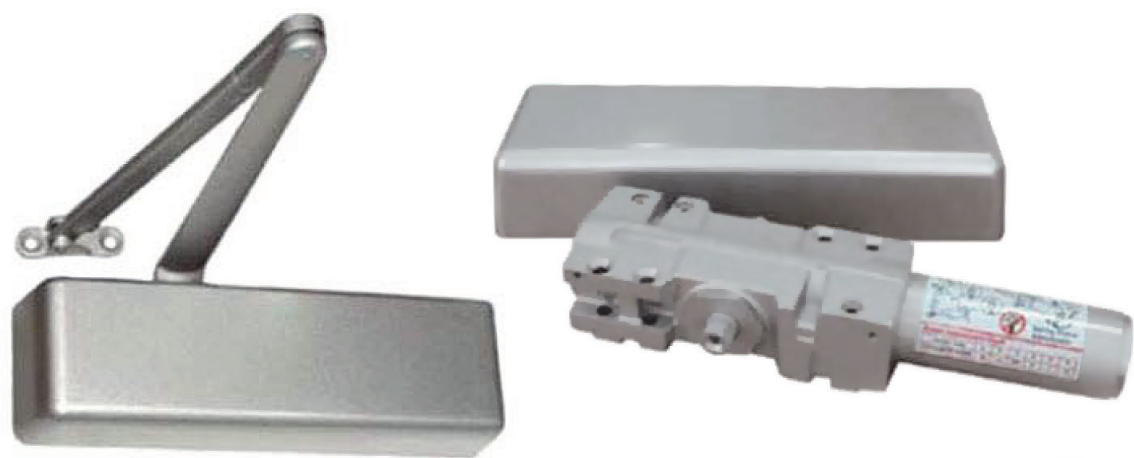
SPECIFICATIONS

Degree of Swing	Up to 135°
Minimum Door Size	1'6"
Adjustability	Latching, Closing & Cush Stop
Mounting Location	Mortised in top rail of door
Application Type	Pocket

Concealed Closer

- Fire rated to 3 hours
- Adjustable to sizes 1 through 5
- Retrofit to existing frames without mortising the frame
- Arm and track hidden when door is open
- Track and arm are color matched to door's hinge and locking channel
- Improved ADA compliance – cam action is 60% more efficient than a standard rack & pinion closer

Note: For abusive applications use the TDC5051 closer



SPECIFICATIONS

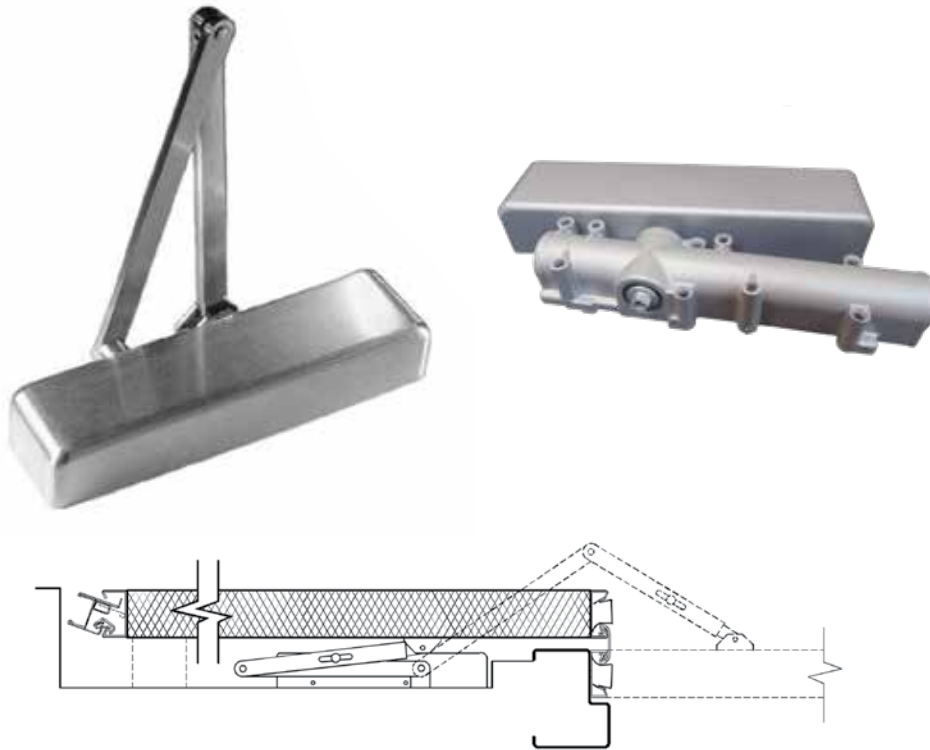
Degree of Swing	Standard Mount (pull side) - 135° Top Jamb Mount (push side) - 120° Parallel Mount (push side) - 180°
Minimum Door Size	2'
Adjustability	Latching, Closing & Back Check
Mounting Location	Surface
Application Type	Active

TDC 5051

- For heavy-duty doors
- Universal application
- Adjustable to sizes 1 through 6
- Standard adjustable back-check function
- Full plastic standard cover
- Aluminum finish
- Meets ANSI A156.26 Grade 1

TDC 8907 Pocket Closer

3.15

**SPECIFICATIONS**

Degree of Swing	180°
Minimum Door Size	2'
Adjustability	Latching, Closing & Back Check
Mounting Location	Pocket Wall
Application Type	180° Hold Open Pocket

TDC 8907

- For 180° pocket application
- Universal application
- Standard adjustable back-check function
- Full plastic standard cover
- Aluminum finish
- Meets ANSI A156.26 Grade 1



Semi-concealed loop runs through hinge and frame

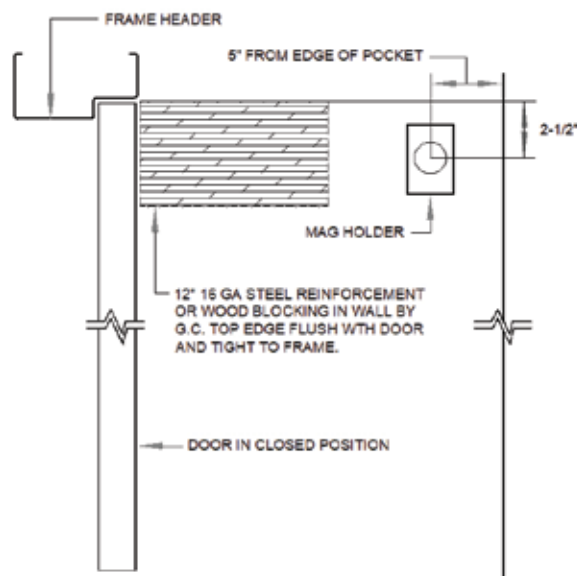
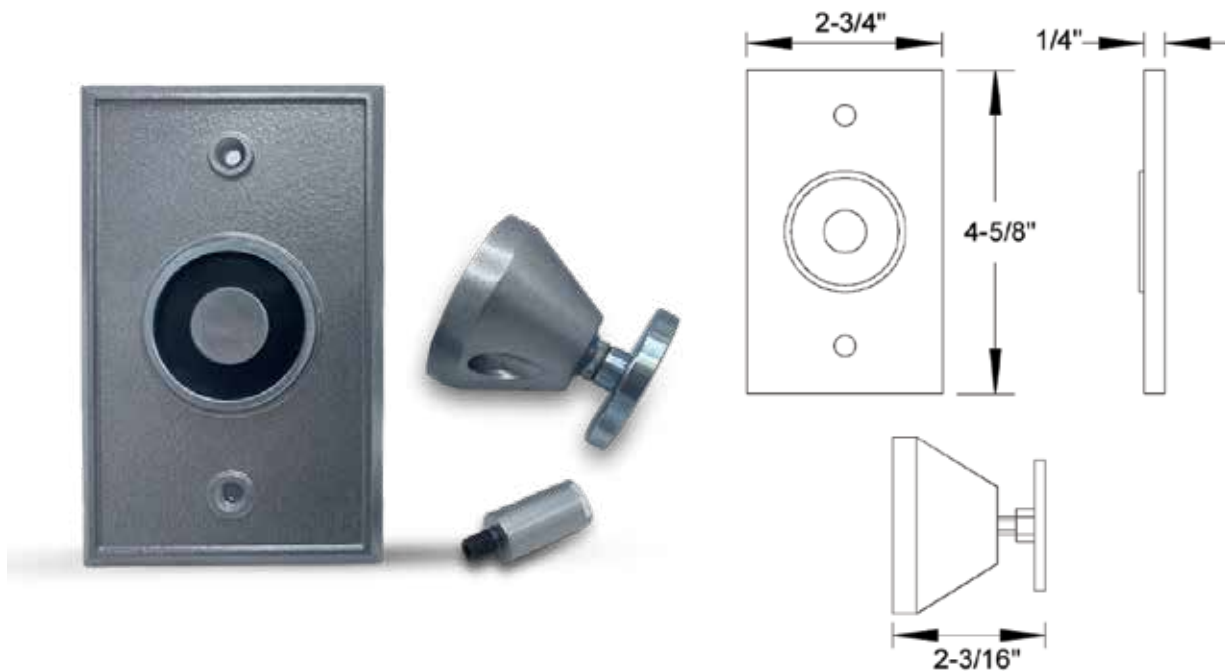
SPECIFICATIONS

Wall Mount Armature Lengths	13/16" to 2-13/16"
Size	1-3/8" Diameter
Projection	1/8" Off door body
Holding Force	40 LBS

Features

- Factory mortised in the door as an integral part of the Total Door System
- Pre-wired to eliminate the outlet box and coordination with the electrician
- 24 Volt DC 0.3 AMP transformer is included

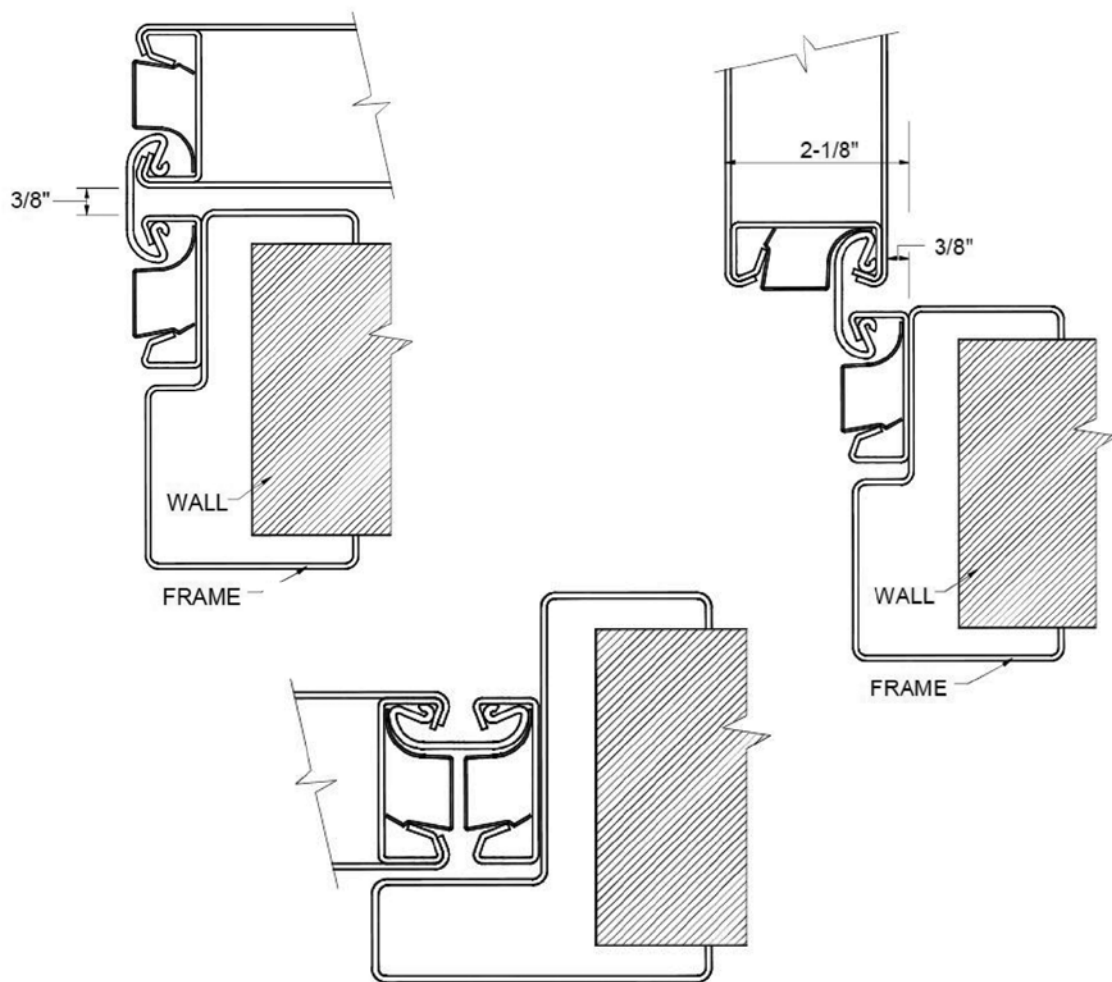
TDH 200 Electromagnetic Holder

**Features**

- 35 lb holding force
- Dual voltage (24/120V) capability
- Optional extension rods available for deeper door to wall conditions
- Powder coated silver

3.18

Section 3 - Hardware: Continuous Hinge

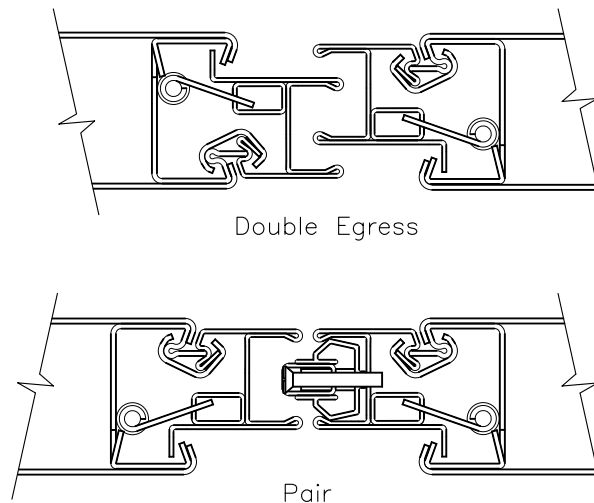
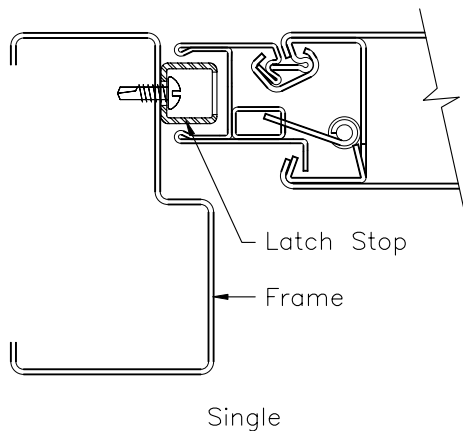


Features

- Reduces air leakage
- Fire rated up to 3 hours
- Minimal throw into opening
- Retrofit into existing frames
- No exposed knuckles or fasteners
- Offers opportunity to plane door with the frame for a better fit
- Surface mounts, no frame prep required and no reinforcement required
- Factory painted in an array of 6 standard colors, with custom colors available

Continuous Locking Channel

3.19

**Features**

- Reduces air leakage
- Provides exceptional security
- Allows for less flex in the door body
- Factory painted in an array of 6 standard colors, with custom colors available
- Eliminates vertical rods, floor hardware, coordinators, astragals and flush bolts on pairs and double egress doors
- Pairs and double egress locking channel engage surface applied strike at head
- Single doors have full surface latch stop compared to traditional ASA strike

Certifications and Technical Data



Certifications and Technical Data

Total Door Systems Limited Warranty	4.01
Certifications	
Certifications	4.02
Intertek Certificate of Compliance	4.03
ANSI/BHMA A156.32 – Standard for Integrated Door Opening Assemblies	4.04
UL EPD (Environmental Product Declaration)	4.05
UL HPD (Health Product Declaration)	4.06
Technical Data	
Total Door Systems Installation & Fire Code Compliance	4.07
R-Value or U-Factor	4.07
Sound Transmission Coefficient (STC)	4.07
Fire Labeling Existing Door Frames	4.07
Field Undercutting of Labeled Doors	4.07
Application of Architectural Overlays and/or Wood Veneer to Labeled Steel Total Door Systems	4.07

This limited warranty covers the materials and workmanship of its products manufactured after March 1, 2017 for five (5) years from the ship date for interior applications and two (2) years from the ship date for exterior applications.

This limited warranty shall apply only if the product is properly stored, installed and maintained in accordance with Total Door Systems' published tolerances. Total Door Systems will, at its option, replace, repair or refund the purchase price paid to Total Door Systems for products which in its opinion, are found to be defective in workmanship or material under normal use and service within the above defined time periods. Total Door Systems' sole responsibility is as stated herein and it shall not be liable for consequential, indirect or incidental damages. *Warranty replacement parts/components must be sent back to the factory for credit.

An RA (return authorization) form must be requested when placing an order. Any and all warranty work must be handled through a factory trained distributor. Please contact Total Door Systems if assistance is need in locating a distributor.*

This limited warranty is in place of all other warranties, express or implied, and excludes any warranties of fitness or merchantability. No agent, representative, dealer, or employee of Total Door Systems has the authority to increase or alter the obligations of this limited warranty.

Notice Requirement

Purchaser is responsible for inspection of product upon receipt to ensure order is complete/accurate and provide notice of discrepancies to Total Door Systems within 30 days.

Storage and Handling Instructions

1. Store Total Doors flat on a level surface in a dry, well ventilated building, separated by foam spacer blocks provided with original shipment so that no projecting hardware touches any part of an adjacent door.
2. Cover doors with opaque covering to keep clean and avoid discoloration. Cover must allow air circulation.
3. Steel doors with wood faces should not be subjected to extremes of heat and/or humidity conditions. Relative humidity should not be less than 30% or more than 60%.
4. Handle with clean gloves and do not drag doors across one another or across other surfaces.

Installation

Total Doors must be installed in full compliance with manufacturer's published tolerances.

Maintenance

To assure coverage under this limited warranty, the following must be maintained: the adjustment of hardware and fasteners attached to or fitted into the doors or frame, the finishes on all wood surfaces and the moisture protection on exterior doors.

Exclusions

This limited warranty does not include:

- Total Doors that are not installed by a factory trained installer.
- Total Doors that are not installed to factory specified tolerances.
- Any products which, in the opinion of Total Door Systems, have been modified, repaired or altered in any way without the express written consent of the Company.
- Doors with cutouts for lights, louvers or other hardware nearer than six inches to the door edge, or doors with less than six inches between cutouts.
- Normal wear and tear including wear-through of finishes or deterioration for reasons other than material and workmanship.
- Items by other manufacturers and/or items supplied in the field.
- Wood surfaced doors exposed to relative humidity of less than 30% or greater than 60%.
- Field Painting of Hinge Verticals (H12, H13, H14 or H15).
- Field Paint of Locking Channel Verticals (L11).
- The appearance of field finished doors.
- The appearance of high gloss surfaced doors.
- Natural variations in the color or texture of wood.
- Custom finishes supplied by customer.
- Freight damage.
- Doors not stored per storage & handling instructions.

Exclusions for Exterior Doors

An exterior door is one that cannot be controlled on both sides for temperature and humidity. The following conditions will void the limited warranty:

- Use of concealed closers.
- Wood faced doors.
- Doors and frames not properly protected by flashing or drip caps.
- Doors that are not sealed top and bottom.

Total Door Systems meet all life safety and compartmentalization requirements without sacrificing the architect's vision. Our doors meet all fire codes and ADA guidelines and are the only integrated door system to be BHMA certified, and to be sustainably manufactured with a UL EPD.

Our driving philosophy is the pursuit of perfection. We have built our processes and service around integrity, efficiency, sustainability, and world-class service.

Total Door Systems is proud to be the only integrated door system manufacturer to have its complete system certified by the following agencies:





This Intertek Certificate of Compliance certifies that Total Door Systems has successfully completed all the requirements of the Steel Fire Doorset – Polystyrene or Mineral Core scheme.

The requirements include an initial assessment and rigorous testing of the door system as a full assembly. Total Door Systems also must perform continuing annual assessments of compliance and testing of samples of products taken from production, which have been registered with Intertek for the products detailed in the certificate.

As fire-rated doors are built to resist heat, fire, and smoke, and to provide building occupants time to escape a burning building, Total Door Systems is proud to be the only integrated door system manufacturer to be tested and certified as a complete assembly. In other words, our door systems are certified to perform in real-world scenarios in ways that help protect life and property.

Certificate of Compliance



Intertek

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You have been awarded:

Intertek Warnock Hersey Mark for Steel Fire Doorset - Polystyrene or Mineral core

UL 10C (1998); UBC 7-2 (1997); CAN4 S104 (1985); UL 10C (2009); UL 1784 (2009); CAN/ULC S104 (2010); NFPA 252 (2012); UL 10C (2016); CAN/ULC S104 (2015); UL 1784 (2015); NFPA 252 (2017)

Certificate number: WHI17 – 20840502

Organization:

Total Door II, Inc.

6145 Delfield
Industrial Drive
Waterford, MI 48329

Product: Steel Fire Doorset – Polystyrene or Mineral core Rating: Up to 180 minutes for Fire Endurance & Hose stream Test Temperature Rise: Greater than 650 degrees F at 30 minutes for Polystyrene core, less than 250 degrees F at 30 minutes for Mineral core

TOTAL DOORS have been tested as per, Category D, which includes doors and frames that are labeled for positive pressure compliance as a complete assembly. A Category D assembly includes all of the following: doors, frames, and all hardware as noted within the product listing.

Construction:

Frame: All frame constructions shown in UL-63 are usable with Total Door. Total Doors may be used with all labeled frames of any manufacturer per the frame manufacturer's listings. Total Doors may be retrofitted to any existing labeled frames that are structurally sound.

Doors: Door bodies are 20 or 18 Gauge steel skins with continuous 16 gauge steel hinge and latch reinforcements. 5 1/2" 18 gauge top and bottom rails. Cores are of polystyrene or mineral core.

3 hour - Steel doors, polystyrene core, with temperature rise over 650 degrees F. with;

- a) 20 & 18 Gauge skins.
- b) Single swing with maximum size of 4' 0" x 8' 0".
- c) Pairs and double egress with maximum size of 8' 0" x 8' 0".
- d) Levers, operating push/pull grips and panic devices, all without the use of Coordinators, flush bolts, astragals, vertical rods or floor strikes
- e) Certified to UL 10C (2016), NFPA 252 (2017), CAN/ULC S104 (2015), UL 1784 (2015). Uses WH C US Mark.

3 hour - Steel doors, mineral core, with temperature rise less than 250 degrees F. with;

- a) 18 Gauge skins.
- b) Single swing with maximum size of 4' 0" x 8' 0".
- c) Pairs and double egress with maximum size of 8' 0" x 8' 0".
- d) Levers, operating push/pull grips and panic devices, all without the use of Coordinators, flush bolts, astragals, vertical rods or floor strikes.
- e) Certified to UL 10C (2016), NFPA 252 (2017), CAN/ULC S104 (2015), UL 1784 (2015). Uses WH C US Mark.

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1½ & ¾ hour - Steel doors, polystyrene core, with temperature rise over 650 degrees F. with;
a) 20 Gauge skins maximum size single swing- 4' 2-3/16" x 9' 0"
b) 20 Gauge skins maximum size pair & double egress swing- 8' 4-3/8" x 9' 0"
c) 18 Gauge skins maximum size single swing- 4' 0" x 9' 0"
d) 18 Gauge skins maximum size pair & double egress swing- 8' 0" x 9' 0"
e) Levers, operating push/pull grips and panic devices, all without the use of Coordinators, flush bolts, astragals, vertical rods or floor strikes.
f) Certified to UL 10C (2016), NFPA 252 (2017), CAN/ULC S104 (2015), UL 1784 (2015). Uses WH C US Mark.

1½ hour - Steel doors, mineral core, with temperature rise less than 250 degrees F. with;
a) 20 Gauge skins size single swing- >4' to the max. of 4' 2-3/16" x 9' 0"
b) 20 Gauge skins size pair & double egress swing- >8' to the max of 8' 4-3/8" x 9' 0"
c) 18 Gauge skins maximum size single swing- 4' 0" x 9' 0"
d) 18 Gauge skins maximum size pair & double egress swing- 8' 0" x 9' 0"
e) Levers, operating push/pull grips and panic devices, all without the use of Coordinators, flush bolts, astragals, vertical rods or floor strikes.
f) Certified to UL 10C (2016), NFPA 252 (2017), CAN/ULC S104 (2015), UL 1784 (2015). Uses WH C US Mark.

20 minute (with hose stream) - Steel doors, polystyrene core with;
a) 20 Gauge skins maximum size single swing- 4' 2-3/16" x 9' 0"
b) 20 Gauge skins maximum size pair & double egress swing- 8' 4-3/8" x 9' 0"
c) 18 Gauge skins maximum size single swing- 4' 0" x 9' 0"
d) 18 Gauge skins maximum size pair & double egress swing- 8' 0" x 9' 0"
e) Levers, operating push/pull grips and panic devices, all without the use of Coordinators, flush bolts, astragals, vertical rods or floor strikes.
f) Certified to UL 10C (2016), NFPA 252 (2017), CAN/ULC S104 (2015), UL 1784 (2015). Uses WH C US Mark.

20 minute (without hose stream) - Steel doors, polystyrene core with;
a) 20 Gauge skins maximum size single swing- 4' 2-3/16" x 10' 0"
b) 20 Gauge skins maximum size pair & double egress swing- 8' 4-3/8" x 10' 0"
c) 18 Gauge skins maximum size single swing- 4' 2-3/16" x 10' 0"
d) 18 Gauge skins maximum size pair & double egress swing- 8' 4-3/8" x 10' 0"
e) See Spec ID 27453 for further information. Certified to UL 10C (2016) and NFPA 252 (2012). Uses WH US Mark.

Door Hardware:

Closers - Mortised closers are approved for all fire ratings including three (3) hour.

Electric - Electric doors, with inclusion of a solenoid for remote control of locking/latching is approved on all labels as part of the door system. A separate label for the solenoid is not required when installed in the lower 40" of the door.

Holders - Mortised semi-concealed electromagnetic holder mounted in the door for all labels.

Lights - Glazing & Door light frames/kits shall be listed and labeled for use in the rated opening.

A steel channel of 16 or 18 gauge shall be installed between the two faces and shall be mechanically fastened in the corners. A strip of listed glazing tape that is listed for use with the specific listed glass shall be placed on both surfaces of glass between the glass and the light kit.

Groove for glazing depth:

Visible glazing area (sq. inch)	Minimum groove depth (inch)
0 - 300	1/2
301 - 400	9/16
401 - 500	5/8
501 - 600	11/16
601 - 1296	3/4

Cutouts shall not be less than 5-1/2 inches from door edges or other door cutouts. Cutout shall not cut reinforcements or stiffeners.

Visible glazing:

Rating (hour)	1/3, 3/4	1, 1-1/2, or Lead-Lined Doors
Maximum area:	1,296 sq. in.	100 sq. in.
Maximum height:	54	33
Maximum width:	30	10

Multiple panels are permitted in 1/3 and 3/4-hour doors when the sum of the areas does not exceed 1,296 square inches with above maximum height and width limitations for each panel.

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Kick plates – Labeling shall not be required where the top of the protection plate is not more than 16 in. (406 mm) above the bottom of the door. Any height, when using Total Door standard bonded wrap around protection plates of Maximum 0.028 inch thick brass, bronze, steel, stainless steel, and aluminum without mechanical fasteners. Plates are to be attached to faces with contact adhesives.

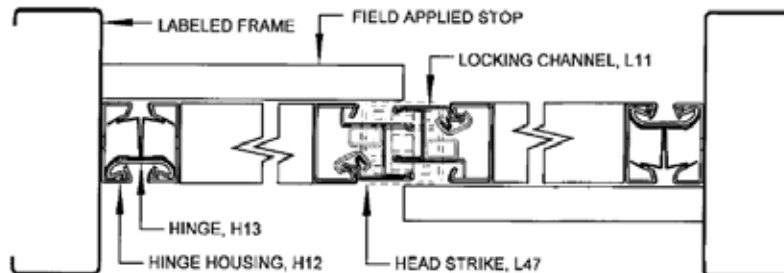
Exit Devices – The exit device is an integral part of the door assembly and may be used with: Push/Pull Operating Grips, Lever Mechanisms, or Panic (Push Plate) Exit Devices. These devices meet the criteria found in UL 305 and can be independently labeled. Exit Devices must be listed as fire exit hardware.

Smoke & Draft - The Total Door and frame assembly were tested in conjunction to test method UL 1784, "Standard for Air Leakage Tests of Door Assemblies." The assembly must have a fire rated air foil W-12 seal applied to the stop of the frame head (field applied) and to the inside of the door's locking channel (factory applied) to meet the air leakage compliance noted below. When required to be tested in accordance with UL 1784 "without an artificial bottom seal", an additional W60 fire rated smoke seal (surface or concealed) is required at the bottom of the door. Refer to Spec ID 25495 for further information.

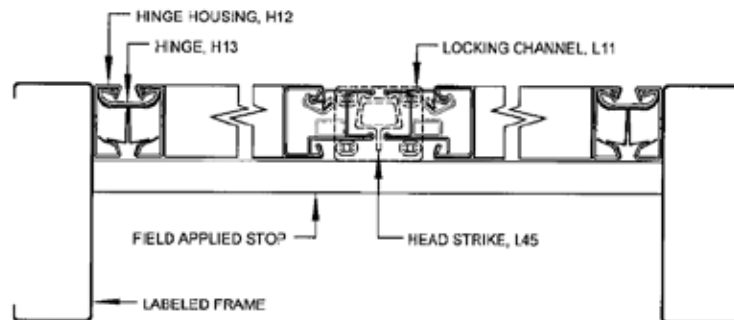
Standard / Code Section	Description	Results
2009 IBC Section 711.5.2 and 2012 IBC Section 710.5.2.2 (Air Leakage Requirement)	Max. air leakage: < 3 cfc per sq.ft. of opening at 0.1 in. of w.c. pressure differential at ambient temperature.	Complies
2009 IBC Section 711.5.2 and 2012 IBC Section 710.5.2.2 (Air Leakage Requirement)	Max. air leakage: < 3 cfc per sq.ft. of opening at 0.1 in. of w.c. pressure differential at 400 degrees F.	Complies

Special Finishes - All labeled steel doors including temperature rise may have Architectural film, genuine wood veneers (non-combustible material UL/ULC/WH approved claddings), stainless steel (except Type 302), aluminum or brass faces ((1250 x 2450) with a maximum thickness of 1/8" (3.2mm)) on one or both sides but must be factory installed.

DOUBLE EGRESS



SAME SWING PAIR



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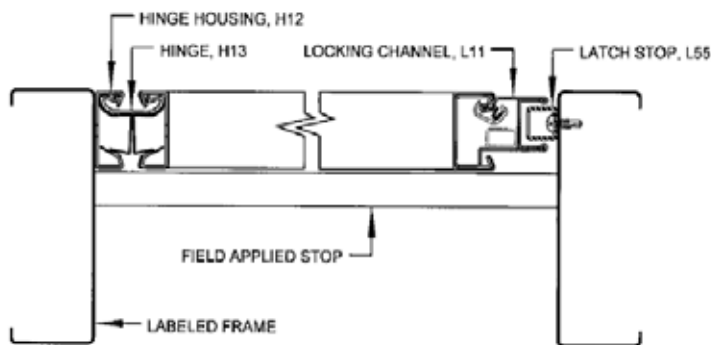
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SINGLE



Specialty Elevator Door Frame (Spec ID 53823): For use in front of Elevator Doors. The assembly uses a proprietary surface mounted 16 gauge steel frame. Approved for use with Total Door only. Doors have a proprietary continuous hinge and interlocking latch system. The assembly must have a fire rated air foil W12 applied at the head of the frame and a W60 fire rated smoke seal (surface or concealed) at the bottom of the door (field applied), and a fire rated air foil W12 applied to the inside of the door's locking channel (factory applied). Standard pairs must have equal sized door leaves.

Size Limitation:
Maximum Nominal Width: 58-1/4"
Maximum Nominal Height: 101-1/8"

Dimensions		
Configuration	Width	Height
Clear Opening	58-1/4"	101-1/8"
Door Leaf	48"	101-1/8"
Overall Frame	64-1/4"	104-1/8"

Limitations*: The following proprietary components are provided with the system: Latches & Hinge System, Frame/Surface-Mounted Closers, Concealed Closer Arms, Surface-Mounted Protection Plates, Viewer, Surface Mounted or Mortised Door Bottoms. Metal Edge or Astragal is not required.

*Additional information is provided in the manufacturer's installation instructions for smoke and draft control size restrictions and limitations.

Ratings Achieved

The product noted above has been tested and qualified for fire resistance ratings per UL 10C, NFPA 252, and CAN / ULC S104 up to and including 90 minute applications. Temperature rise is greater than 650°F at 30 minutes on polystyrene core doors and less than 250°F at 30 minutes on mineral core doors.

The assembly has been tested in accordance with UL 1784. Results were achieved at four differential pressures ranging from 0.05 to 0.3 in. water column (12 to 75 Pa).

Standard/Code Section	Property	Results
UL 1784	Maximum air leakage at 0.05, 0.1, 0.2 and 0.3 inches of water column differential at ambient and elevated (400°F) temperature.	< 3.0 cfm/ft2

Note: This assembly was tested without an artificial bottom seal. The assembly may be installed in areas where pressurization is provided to control smoke movement in accordance with Section 4.3.2 of NFPA 105 (2019) and for hoistway opening protection and lobby doorways as allowed in Chapter 30 of the 2018 IBC.

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TECHNICAL DATA SHEET* 60A				
DOOR CONSTRUCTION FOR POSITIVE PRESSURE B, C & 20 MIN. LABELS				
<p style="text-align: center;"><u>ELEVATION</u></p>	<p>FIRE LABELS MAY BE 1-1/2 HR., 3/4 HR. OR 20 MIN. AND TEMPERATURE RISE AND SMOKE AND DRAFT</p> <p>FACES MAY BE 20 OR 18 GA. STEEL</p> <p>FINISHES MAY BE: PRIME, POLYURETHANE, WOOD VENEER, VINYL, ST. STEEL, BRASS OR BRONZE</p> <p>CORE MAY BE POLYSTYRENE (STD) MINERAL CORE, TEMP. RISE, 250°</p>			
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> <p>Total Door SYSTEMS™ Global Leader in Integrated Access Technology™</p> </div> <div> <p>TEL. (800) 852-6660 www.totaldoor.com © Total Door 2021</p> </div> <div> <table border="1"> <tr><td>FILE NAME</td></tr> <tr><td>TDS60A</td></tr> <tr><td>DATE 4/6/2021</td></tr> </table> </div> </div>		FILE NAME	TDS60A	DATE 4/6/2021
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TECHNICAL DATA SHEET [®] 60E								
DOOR CONSTRUCTION FOR POSITIVE PRESSURE A LABELS								
	<p>FIRE LABELS MAY BE 3 HR. AND TEMPERATURE RISE AND SMOKE AND DRAFT</p> <p>FACES MAY BE 20 OR 18 GA. STEEL</p> <p>FINISHES MAY BE: PRIME, POLYURETHANE, WOOD VENEER, VINYL, ST. STEEL, BRASS OR BRONZE</p> <p>CORE MAY BE POLYSTYRENE (STD) MINERAL CORE, TEMP. RISE, 250°</p>							
<p style="text-align: center;">ELEVATION</p>								
<table border="0"><tr><td></td><td>Total Door SYSTEMS <small>Global Leader in Integrated Access Technology™</small></td><td>TEL. (800) 852-6660 www.totaldoor.com © Total Door 2021</td><td><table border="1"><tr><td>FILE NAME</td></tr><tr><td>TDS60E</td></tr><tr><td>DATE 4/6/2021</td></tr></table></td></tr></table>			Total Door SYSTEMS <small>Global Leader in Integrated Access Technology™</small>	TEL. (800) 852-6660 www.totaldoor.com © Total Door 2021	<table border="1"><tr><td>FILE NAME</td></tr><tr><td>TDS60E</td></tr><tr><td>DATE 4/6/2021</td></tr></table>	FILE NAME	TDS60E	DATE 4/6/2021
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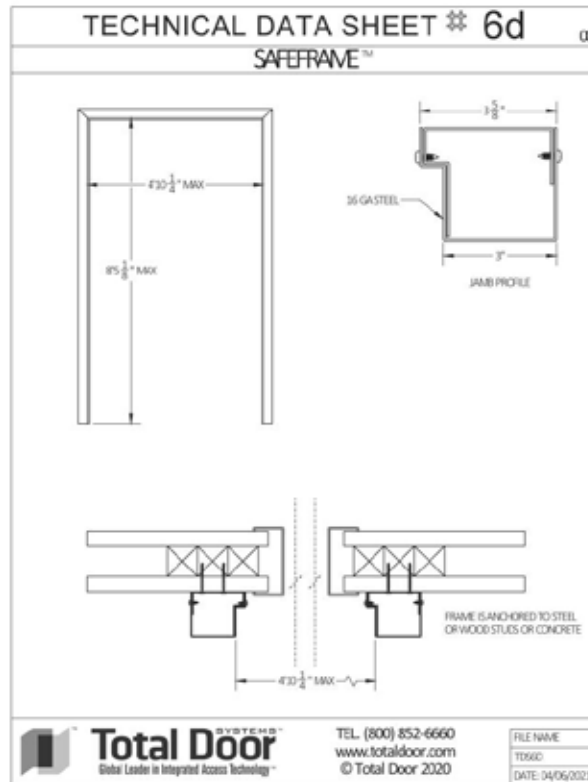
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Check Listing report ref 27453, 25495, 25496, 25499, 53823 & Test reports ref. 3079311, 3149284MID-006 & 3190974MID-002 for full details.

Certification body: Intertek Testing Services NA, Inc.
Initial registration: September 1st, 2017
Date of expiry: August 31st, 2022
Issue status: 3

Charles Meyers
Name

Signature

April 27th, 2021
Date

www.intertek.com

Registered address:
Intertek Testing Services NA, Inc. 545 E. Algonquin Rd. Arlington Heights, IL 60005 USA

The certificate and schedule are held in force by regular annual surveillance visits by Intertek Testing Services NA, Inc. and the reader or user should contact Intertek to validate its status. This certificate remains the property of Intertek Testing Services NA, Inc. and must be returned to them on demand. This Certificate is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this certificate. Only the Client is authorized to permit copying or distribution of this certificate and then only in its entirety. Use of Intertek's Certification mark is restricted to the conditions laid out in the agreement. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow up Services are for the purpose of assuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purposes of production quality control and do not relieve the Client of their obligations in this respect.



The American National Standards Institute (ANSI) and Builders Hardware Manufacturers Association (BHMA) develop durability, strength, and performance standards for door hardware. To receive ANSI/BHMA certification, products must undergo a set of thorough and rigorous testing, including twist, preload, impact, force tests, and more to make sure all products comply with building standards.

Total Door Systems is the only integrated door system certified to ANSI/BHMA Standard A156.32, the standard for integrated door opening assemblies.



Builders Hardware Manufacturers Association
355 Lexington Avenue, 15th Floor
New York, NY 10017
<https://buildershardware.com>

BHMA Certificate of Compliance

This confirms that the products listed are certified in accordance with the ANSI/BHMA Standard(s) indicated for the date shown below.

Date printed: 12/18/2023

BHMA Listing Company

Total Door Systems
6145 Delfield Dr
Waterford, MI 48329-1388
US
www.totaldoor.com

Applicable ANSI/BHMA Standard(s):

A156.32 Integrated Door Opening Assemblies

These products are included in the BHMA Certification Program. Only products listed in the BHMA Online Certified Product Directory are allowed to display the BHMA Certified Mark and assert compliance with this Program. This Certificate of Compliance is accurate and valid as of the date of printing.

Please see website for latest information:

<https://buildershardware.com/Certification-Program/Certified-Products-Directory>

Pair of doors, single acting

ANSI Number	Door Material Description	Grade	Meets A156.41	Standard Year	Application	Brand Series	Hardware Numbers	Brand Description
Q2241	Hollow metal	Grade 1	Y	2014	Elevator Hoistway Pair	Safe Series	PF200, P14, L60, L82, L83, L84 , M32,M33, M35, M52,TDC96, TDC 8907, TDC 5051,H13,L11	Complete system with Factory Trained Installer

Pair of doors, double egress

ANSI Number	Door Material Description	Grade	Meets A156.41	Standard Year	Application	Brand Series	Hardware Numbers	Brand Description
Q2341	Hollow metal	Grade 1	Y	2014	Double Egress	Safe Series	PF200, P14, L60, L82, L83, L84 , M32,M33, M35, M52,TDC96, TDC 8907, TDC 5051,H13,L11	Complete system with Factory Trained Installer

Pair of doors, single acting

ANSI Number	Door Material Description	Grade	Meets A156.41	Standard Year	Application	Brand Series	Hardware Numbers	Brand Description
Q2241	Hollow metal	Grade 1	Y	2014	Pair	Safe Series	PF200, P14, L60, L82, L83, L84 , M32,M33, M35, M52,TDC96, TDC 8907, TDC 5051,H13,L11	Complete system with Factory Trained Installer

Single door, single acting

ANSI Number	Door Material Description	Grade	Meets A156.41	Standard Year	Application	Brand Series	Hardware Numbers	Brand Description
Q2141	Hollow metal	Grade 1	Y	2014	Single	Safe Series	PF200, P14, L60, L82, L83, L84 , M32,M33, M35, M52,TDC96, TDC 8907, TDC 5051,H13,L11	Complete system with Factory Trained Installer
Q2141	Hollow metal	Grade 1	Y	2014	Elevator Hoistway Single	Safe Series	PF200, P14, L60, L82, L83, L84 , M32,M33, M35, M52,TDC96, TDC 8907, TDC 5051,H13,L11	Complete system with Factory Trained Installer



Total Door SYSTEMS
Global Leader in Integrated Access Technology®

CERTIFICATIONS: UL ENVIRONMENTAL PRODUCT DECLARATION (EPD)



Total Door Systems measures and tracks the full environmental footprint of our door systems' life cycle and analyzes them to ensure we are meeting continuous improvement goals month after month and year after year to create a more environmentally sustainable marketplace for all.

Underwriters' Laboratories Environmental Product Declarations, or UL EPDs, replace the former LEED certification system and document a product's life cycle and how it affects the environment to help architects and others make sustainable choices.

The UL EPD provides information including a product's global warming potential, smog creation, ozone depletion and water pollution. It can also include other impacts such as potential toxicity risks.

Total Door Systems is proud to offer sustainable products and to be the only integrated door system manufacturer to have a UL EPD that documents the life cycle of our entire integrated system.

Exclusions: UL EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. Life cycle assessments do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc.

Accuracy of Results: EPDs regularly rely on estimations of impacts, and the level of accuracy in estimation of effects differs for any particular product line and reported impact.

Comparability: EPDS are not comparative assertions and are either not comparable or have limited comparability when they cover different life cycle stages, are based on different product category rules or are missing relevant environmental impacts. EPDs from different programs may not be comparable.

INTEGRATED METAL DOOR ASSEMBLY WITH LITE KIT – ELEVATOR SHAFT APPLICATION



Total Door Systems is the global leader in fully integrated door systems that provide unparalleled security and life safety, unmatched reliability, and respect for the integrity of the architect's vision with a nearly infinite selection of design options. With all parts engineered, manufactured, and assembled from Total Door Systems' award-winning Waterford, Michigan plant, our integrated door systems arrive complete with fewer parts for streamlined installation, and savings to you in additional buildout and labor costs. Our driving philosophy is the pursuit of perfection. We have built our processes and service around integrity, efficiency, sustainability, and world-class service. Total Door Systems measures and tracks the full environmental footprint of our door systems' life cycle and analyzes them to ensure we are meeting continuous improvement goals month after month and year after year to create a more environmentally sustainable marketplace for all.



ENVIRONMENTAL PRODUCT DECLARATION

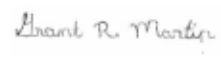



Total Door Systems
Integrated Metal Door Assembly with Lite
Kit-Elevator Shaft Application



According to ISO 14025,
EN 15804 and ISO 21930:2017

EPD PROGRAM AND PROGRAM OPERATOR NAME, ADDRESS, LOGO, AND WEBSITE	UL Environment 333 Pfingsten Road Northbrook, IL 60611 https://www.ul.com/ https://spot.ul.com
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	General Program Instructions v.2.5 March 2020
MANUFACTURER NAME AND ADDRESS	Total Door Systems 6145 Delfield Dr, Waterford, MI 48329
DECLARATION NUMBER	4789700730.101.1
DECLARED PRODUCT & FUNCTIONAL UNIT OR DECLARED UNIT	Integrated Metal Door Assembly with Lite Kit-Elevator Shaft Functional Unit: One commercial steel door, nominal dimension of 3'x 7' door with lite kit
REFERENCE PCR AND VERSION NUMBER	Part B: Commercial Steel Doors and Steel Frames EPD Requirements, UL 10010-27 (Second Edition, September 1, 2020)
DESCRIPTION OF PRODUCT APPLICATION/USE	Commercial grade steel hardware components that can be made of various materials such as aluminum, stainless steel, brass and/or various plastics. Installed to facilitate entry and exit to an elevator shaft and cover an elevator shaft opening.
PRODUCT RSL DESCRIPTION (IF APPL.)	25 Years
MARKETS OF APPLICABILITY	North America
DATE OF ISSUE	April 1, 2020
PERIOD OF VALIDITY	5 Year
EPD TYPE	Product-Specific
RANGE OF DATASET VARIABILITY	N/A
EPD SCOPE	Cradle to gate with options
YEAR(S) OF REPORTED PRIMARY DATA	2019
LCA SOFTWARE & VERSION NUMBER	GaBi ts Version 10.0.0.71
LCI DATABASE(S) & VERSION NUMBER	GaBi Content Version 2020.2
LCIA METHODOLOGY & VERSION NUMBER	CML 2001-Jan 2016 and TRACI 2.1

This PCR review was conducted by:	UL Environment
	PCR Review Panel
	epd@ulenvironment.com
This declaration was independently verified in accordance with ISO 14025: 2006. <input type="checkbox"/> INTERNAL <input checked="" type="checkbox"/> EXTERNAL	
	Grant R. Martin, UL Environment
This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	
	Thomas P. Gloria, Industrial Ecology Consultants

LIMITATIONS

Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc.

Accuracy of Results: EPDs regularly rely on estimations of impacts; the level of accuracy in estimation of effect differs for any particular product line and reported impact.

Comparability: EPDs from different programs may not be comparable. Full conformance with a PCR allows EPD comparability only when all stages of a life cycle have been considered. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.



Total Door Systems
Integrated Metal Door Assembly with Lite
Kit-Elevator Shaft Application



According to ISO 14025,
EN 15804 and ISO 21930:2017

1. Product Definition and Information

1.1. Description of Company

Total Door Systems is the global leader in fully integrated door systems that provide unparalleled security, unmatched reliability, and respect for the integrity of the architect's vision with a nearly infinite selection of design options.

With all parts engineered, manufactured and assembled from Total Door Systems' award-winning Waterford, Michigan plant, the integrated door systems arrive complete with fewer parts for streamlined installation.

1.2. Product Description

The integrated door assembly's body is commercial grade steel while the hardware components can be made of various materials such as aluminum, stainless steel, brass and/or various plastics. The door's body is custom finished prior to shipping. The product contains a flush panic exit device, an electromagnetic hold open device and standard closures, gasketing, locking mechanisms, hinges, hardware and a lite kit. This product was determined to be representative of the integrated metal door assembly products sold by Total Door Systems.

PARAMETER	VALUE	UNIT
Sound Transmission Coefficient	33	%
U-value	0.21	%
Declared product properties	Certified to BHMA – A156.32, Integrated Door Opening Assemblies, 2015	-

1.3. Application

Total Door's products can be used in both commercial and residential applications.

1.4. Declaration of Methodological Framework

This LCA is a cradle-to-gate with options study, as represented by the flow diagram below. A summary of the life cycle stages can be found in Table 4. The reference service life (RSL) is outlined in Table 7. The cut-off criteria are described in Cut-off Rules, and the allocation procedures are described in the Allocation section. No known flows are deliberately excluded from this EPD. Third party verified ISO 14040/44 secondary LCI data sets contribute more than 67% of total impacts in all impact categories required by the PCR.



Total Door Systems
Integrated Metal Door Assembly with Lite
Kit-Elevator Shaft Application

According to ISO 14025,
EN 15804 and ISO 21930:2017

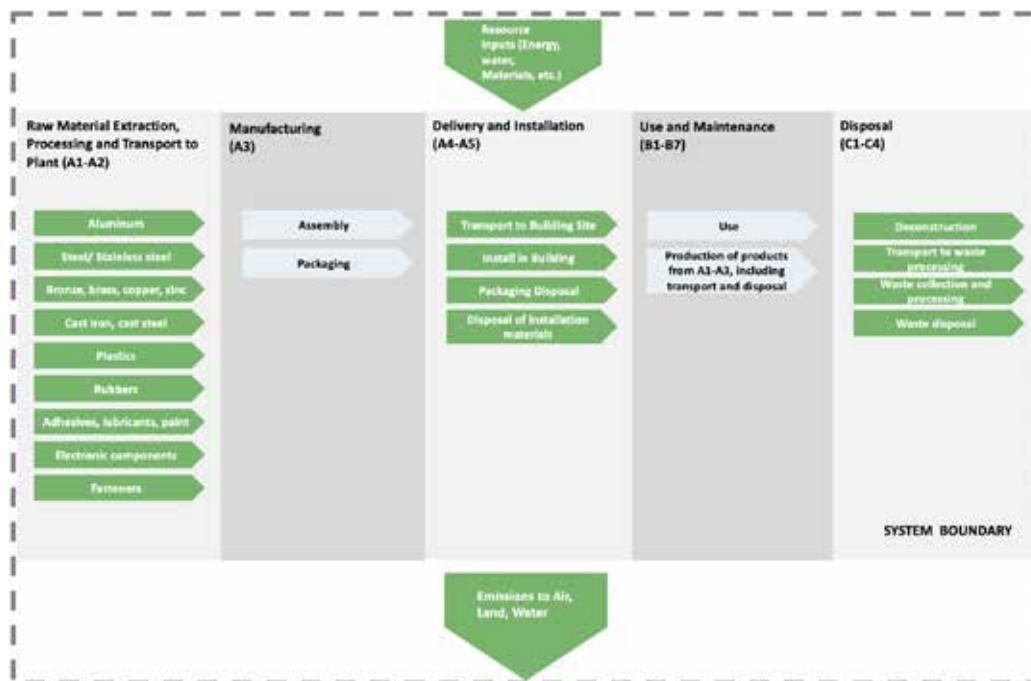


Figure 1: Flow Diagram

1.5. Material Composition

The materials that make up the Integrated Metal Door Assembly – Standard 3'x7' Door with Lite Kit are indicated in Table 1.

Table 1: Material Composition

MATERIAL	INTEGRATED DOOR ASSEMBLY
Adhesive	0.57%
Aluminum	11.32%
Brass	0.01%
Electronic components	0.60%
Galvanized steel sheet	41.65%
Galvanized steel	30.50%
Glass	1.72%
Iron	1.73%
HPDE	0.01%
Nitrile butadiene rubber	0.00%

MATERIAL	INTEGRATED DOOR ASSEMBLY
Nylon 66	0.08%
Oil	0.10%
Paint	0.32%
Polystyrene	1.44%
POM	0.01%
Polypropylene	0.00%
Polyurethane	0.00%
Styrene butadiene rubber	0.00%
Silicone	0.22%
Steel	7.12%
Stainless steel	1.00%
Steel alloy	0.06%
Varnish	0.02%
Wood	1.44%
Zinc	0.06%

1.6. Properties of Declared Product as Delivered

After manufacturing, Integrated Door Assemblies are laid on a pallet that is covered with a cardboard liner and foam spacer. Once the door is laid on the pallet, another cardboard liner and foam spacer is placed on the door. This process is repeated until the order is fulfilled or the stacked doors have reached 12 units high. Once stacking is completed a final layer of foam and cardboard is placed on the stack of doors. 2x4s are then laid on the stack for added protection. The entire pallet is then bound by metal banding and wrapped in plastic wrap. Product is shipped via truck.

1.7. Manufacturing

Manufacturing of all Total Door System products occurs at the company's facility in Waterford, MI. Manufacturing follows strict "Just in Time" principles to limit waste and inefficiencies. Manufacturing begins when raw materials are received at the facility. After receipt of the raw materials, they are moved through a CNC punch for sizing and cutting. The process continues onto the Press Break where the door body is prepared for the door skin. Once press breaking is completed, the product moves through to a CNC glue machine. At this point, all door body reinforcements are affixed (vertical and horizontal) and the core is then inserted. Finally, the top door skin is placed on the assembly. Once the door body has been assembled it is then welded to maintain all fire ratings. The door is then coated with a finish and pushed to final assembly line where hinges, latches, closers, exit devices and all other hardware materials are installed.

Natural Resources used in the manufacturing process include electricity, natural gas and water. Steel waste is also generated throughout each step as the product is formed and assembled. All steel waste is collected and recycled off site.

1.8. Packaging

Packaging utilized in the shipment of the product is described in Table 2.

Table 2: Packaging

MATERIAL	INTEGRATED DOOR ASSEMBLY	UNIT	DISPOSAL PATHWAY
Cardboard	5.62E+00	kg	Landfilled (20%), Incinerated (5%), Recycled (75%)
PE Film	5.60E-01	kg	Landfilled (68%), Incinerated (17%), Recycled (15%)
Foam	2.25E+00	kg	Landfilled (68%), Incinerated (17%), Recycled (15%)
Pallet	2.81E+00	kg	Landfilled (20%), Incinerated (5%), Recycled (75%)

1.9. Transportation

It is assumed that all raw materials are distributed by truck and ship, based on global region. An average distance using this information was calculated and used in the model.

The transport distance to the end customers was calculated based on sales data for the year 2019. The transportation distance for all waste flows is assumed to be 200 km. Both distances are provided in the sub-category PCR in Section 3.12.

1.10. Product Installation

Detailed installation instructions are provided online at <https://totaldoor.com/installer/>. Installation equipment is required though not included in the study as these are multi-use tools and the impacts per declared unit is considered negligible. Packaging waste is generated and disposed of in this stage. Packaging and installation waste disposal have been modeled as per guidelines in section 2.8.5 of *Part A: Life Cycle Assessment Calculation Rules and Report Requirements* from UL Environment. Packaging installation waste are either landfilled, incinerated or recycled.

An installation key, which is provided with the product, is required to install the Total Door System. The sourcing and manufacturing of this key is included in A1-A3 since it is included with the product. However, the disposal of the key is included in this stage. Other installation materials, such as the hinge block and tek screws, follow this same pattern (i.e. impacts calculated in product stage. Disposal accounted for in construction process stage). All installation materials are included with the Integrated Door System.

Product should be installed by a professional and is subject to commercial building codes. Proper equipment, including protective equipment, should be used. Total Door products must be installed in full compliance with manufacturer's written instructions, which are included with each product.

1.11. Reuse, Recycling, and Energy Recovery

Integrated Door Assemblies may be recycled or reused at the end of life. The LCA that this EPD is created from takes the conservative approach by assuming that all products are disposed of within the system boundary.

1.12. Disposal

Disposal pathways in the EPD are modeled in accordance with disposal routes and waste classification referenced in Sections 2.8.5 and 2.8.6 of *Part A: Life Cycle Assessment Calculation Rules and Report Requirements* from UL Environment. This indicates an end-of-life split amongst landfill, recycling, and incineration pathways. For metals disposed in the United States, 85% is recycled and 15% is landfilled. All plastics are landfilled in the United States.

2. Life Cycle Assessment Background Information

2.1. Functional Unit

The functional unit for doors is one installed commercial steel door with nominal dimensions of 3-feet x 7-feet, installed in a North American standard building with an Estimate Service Life of 75 years, as indicated in Table 3.

Table 3: Functional Unit Details

NAME	INTEGRATED DOOR ASSEMBLY	UNIT
Functional Unit	One installed commercial steel door with nominal dimensions of 3-feet x 7-feet over the estimated service life of a building which is 75 years	
Mass per functional unit, including fasteners	6.32E+01	kg
Reference Service Life (RSL)	25	years

The fasteners needed for installation are supplied by the manufacturer with the product and therefore are accounted for together with the product.

2.2. System Boundary

The type of EPD is cradle-to-grave. All LCA modules are included and are summarized in Table 4.

Table 4: Summary of Included Life Cycle Stages

MODULE NAME	DESCRIPTION	ANALYSIS PERIOD	SUMMARY OF INCLUDED ELEMENTS
A1	Product Stage: Raw Material Supply	2019	Raw Material sourcing and processing as defined by secondary data.
A2	Product Stage: Transport	2019	Shipping from supplier to manufacturing site. Fuel use requirements estimated based on product weights and estimated distance.
A3	Product Stage: Manufacturing	2019	Energy, water and material inputs required for manufacturing products from raw materials. Packaging materials and manufacturing waste are included as well.
A4	Construction Process Stage: Transport	2019	Shipping from manufacturing site to project site. Fuel use requirements estimated based on product weights and mapped distances.
A5	Construction Process Stage: Installation	2019	Installation materials, installation waste and packaging material waste.
B1	Use Stage: Use	2019	The usage of this product does not result in direct material impacts or emissions.
B2	Use Stage: Maintenance	2019	The maintenance of the products does not involve any consumption of energy or resources.
B3	Use Stage: Repair	2019	The product does not require repairing once installed.
B4	Use Stage: Replacement	2019	Total materials and energy required to manufacture the replacements needed

MODULE NAME	DESCRIPTION	ANALYSIS PERIOD	SUMMARY OF INCLUDED ELEMENTS
			to meet the functional unit.
B5	Use Stage: Refurbishment	2019	The products do not require refurbishment once installed.
B6	Operational Energy Use	N/A	Module not declared
B7	Operational Water Use	N/A	Module not declared
C1	EOL: Deconstruction	2019	No inputs required for deconstruction.
C2	EOL: Transport	2019	Shipping from project site to landfill. Distance assumed to be 200 km from installation site to landfill.
C3	EOL: Waste Processing	2019	Waste processing not required. All waste can be processed as is.
C4	EOL: Disposal	2019	The disposal process of the product varies with the material type as per Part A Section 2.8.5. The impacts from landfilling and recycling are modeled based on secondary data.
D	Benefits beyond system	N/A	Module not declared

2.3. Estimates and Assumptions

All estimates and assumptions are within the requirements of ISO 14040/44. The majority of the estimations are within the primary data. The primary data was collected as annual totals including all utility usage and production information. For the LCA, the usage information was divided by the production in pieces to create an energy and water use per declared unit, i.e., one unit of product. Other assumptions are listed below:

- It is assumed that there is a 10% scrap loss rate of the input raw material while manufacturing all of Total Door's products.
- The manufacturing utility inputs are allocated on a per-unit value that was derived from the total production by units.
- The installation tools are used enough times that the per unit of product impacts are negligible.

2.4. Cut-off Criteria

All inputs in which data was available were included. Material inputs greater than 1% (based on total mass of the final product) were included within the scope of analysis. Material inputs less than 1% were included if sufficient data was available to warrant inclusion and/or the material input was thought to have significant environmental impact. Cumulative excluded material inputs and environmental impacts are less than 5% based on total weight of the functional unit.

There is no excluded material or energy input or output, except as noted below:

- Any finishes on the product (<0.1%)
- As the tools used during the installation of the product are multi-use tools and can be reused after each installation, the per-functional unit impacts are considered negligible and therefore are not included.
- Some material inputs may have been excluded within the secondary GaBi datasets used for this project. All GaBi datasets have been critically reviewed and conform to the exclusion requirements of the PCR.

MODULE NAME	DESCRIPTION	ANALYSIS PERIOD	SUMMARY OF INCLUDED ELEMENTS
			to meet the functional unit.
B5	Use Stage: Refurbishment	2019	The products do not require refurbishment once installed.
B6	Operational Energy Use	N/A	Module not declared
B7	Operational Water Use	N/A	Module not declared
C1	EOL: Deconstruction	2019	No inputs required for deconstruction.
C2	EOL: Transport	2019	Shipping from project site to landfill. Distance assumed to be 200 km from installation site to landfill.
C3	EOL: Waste Processing	2019	Waste processing not required. All waste can be processed as is.
C4	EOL: Disposal	2019	The disposal process of the product varies with the material type as per Part A Section 2.8.5. The impacts from landfilling and recycling are modeled based on secondary data.
D	Benefits beyond system	N/A	Module not declared

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- Any finishes on the product (<0.1%)
- As the tools used during the installation of the product are multi-use tools and can be reused after each installation, the per-functional unit impacts are considered negligible and therefore are not included.
- Some material inputs may have been excluded within the secondary GaBi datasets used for this project. All GaBi datasets have been critically reviewed and conform to the exclusion requirements of the PCR.

2.5. Data Sources

Primary data were collected by facility personnel and from utility bills and was used for all manufacturing processes. Whenever available, supplier data was used for raw materials used in the production process. When primary data did not exist, secondary data for raw material production was utilized from GaBi 10.0.0.71, GaBi Database Version 2020.2.

2.6. Data Quality

Geographical Coverage

The geographical scope of the manufacturing portion of the life cycle is Waterford Township, Michigan. This LCA uses country specific energy datasets that take into account US eGrid specific energy and transportation mixes. Overall geographic data quality is considered good.

Time Coverage

Primary data were provided by the manufacturer and represent calendar year 2019. Using 2019 data meets the PCR requirement that manufacturer specific data be within the last 5 years. Time coverage of this data is considered excellent. Data necessary to model cradle-to-gate unit processes was sourced from thinkstep LCI datasets. Time coverage of the GaBi datasets varies from approximately 2010 to present. All datasets rely on at least one 1-year average data. Overall time coverage of the datasets is considered good and meets the requirement of the PCR that all data be updated within a 10-year period. The specific time coverage of secondary datasets can be referenced in the dataset references table in each supplemental LCA report.

Technological Coverage

Primary data provided by the manufacturer is specific to the technology that the company uses in manufacturing their product. It is site specific and considered of good quality. It is worth noting that the energy and water used in manufacturing the product includes overhead energy such as lighting, heating and sanitary use of water. Sub-metering was not available to extract process only energy and water use from the total energy use. Sub-metering would improve the technological coverage of data quality. Data necessary to model cradle-to-gate unit processes was sourced from Gabi LCI datasets. Technological coverage of the datasets is considered good relative to the actual supply chain of Total Door. While improved life cycle data from suppliers would improve technological coverage, the use of lower quality generic datasets does meet the goal of this EPD.

Completeness

The data included is consider complete. The LCA model included all known material and energy flows, with the exception of what is listed in Section 2.4. As pointed out in that section, no known flows above 1% were excluded and the sum of all excluded flows totals less than 5%.

2.7. Period under Review

The period under review is calendar year 2019.

2.8. Allocation

General principles of allocation were based on ISO 14040/44. Where possible, allocation was avoided. To derive a per-unit value for manufacturing inputs such as electricity, thermal energy, and water, allocation based on total production

by units was adopted. Discussions with Total Door staff divulged this was a more representative way to allocate the manufacturing inputs based on the manufacturing processes used and the types of products created. There are several other products that are assembled and packaged within the same facility. It is assumed that energy used for these purposes are the same across different products. Regarding secondary datasets, as a default, GaBi datasets use a physical mass basis for allocation.

3. Life Cycle Assessment Scenarios¹

Table 5: Transport to the building site (A4)

NAME	INTEGRATED DOOR ASSEMBLY	UNIT
Fuel type	Diesel	-
Liters of fuel	38.43	l/100km
Vehicle type	Truck – Trailer, basic enclosed/ 50,000 lb. payload	-
Transport distance	1.71E+03	km
Capacity utilization	65	%
Weight of products transported	6.32E+01	kg
Capacity utilization volume factor	1	-

Table 6: Installation into the building (A5)

NAME	INTEGRATED DOOR ASSEMBLY	UNIT
Fasteners	The fasteners for installation are accounted for in A1-A3.	
Waste material at the construction site before waste processing, generated by production installation	0.67E-01	kg
Pulp Recycling (75%)	2.87E+00	kg
Pulp Landfilling (20%)	0.76E+00	kg
Pulp Incineration (5%)	0.19E+00	kg
Total Pulp Packaging Waste	3.83E+00	kg
Plastic Recycling (75%)	0.19E+00	kg
Plastic Landfilling (20%)	0.86E+00	kg
Plastic Incineration (5%)	0.21E+00	kg
Total Plastic Packaging Waste	1.28E+00	kg
Biogenic carbon contained in packaging	12.48	kg CO ₂
VOC emission	N/A	µg/m ³

¹ The tables for B1, B2, B3, B5, B6, and B7 are not included as these stages do not involve any flow input or output.

Total Door Systems
 Integrated Metal Door Assembly with Lite
 Kit-Elevator Shaft Application

According to ISO 14025,
 EN 15804 and ISO 21930:2017

Table 7: Reference Service Life

NAME	INTEGRATED DOOR ASSEMBLY	
RSL	25 years	years
Design application parameters	Installation per recommendation by manufacturer	-
An assumed quality of work	Accepted industry standard	-
Indoor environment	Normal building operating conditions	-
Use conditions	Normal use conditions	-
Maintenance	None required	-

Table 8: Replacement (B4)

NAME	INTEGRATED DOOR ASSEMBLY	UNIT
Reference Service Life	25	Years
Replacement cycles ((ESL/RSL)-1)	2	#
Replacement of worn parts	N/A	kg
Further assumptions for scenario development	N/A	-

Table 9: End of life (C1-C4)

NAME		INTEGRATED DOOR ASSEMBLY	UNIT
Collection process	Collected with mixed construction waste	6.31E+01	kg
Recovery	Metal Waste Recycling (85%)	5.37E+01	kg
	Metal Waste Landfilling (15%)	9.47E+00	kg
Disposal	Product or material for final deposition	9.47E+00	kg

4. Life Cycle Assessment Results

Table 9: Description of the system boundary modules

	PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
	Raw material supply	Transport	Manufacturing	Transport from gate to site	Assembly/Install	Use	Maintenance	Repair	Replacement	Refurbishment	Building Operational Energy Use During Product Use	Building Operational Water Use During Product Use	Deconstruction	Transport	Waste processing	Disposal	Reuse, Recovery, Recycling Potential
Cradle to Gate with Options	X			X	X	X	X	X	X	X	MND	MND	X	X	X	X	MND
X = Included stages, MND = Module not declared																	

ENVIRONMENTAL PRODUCT DECLARATION



Total Door Systems
Integrated Metal Door Assembly with Lite
Kit-Elevator Shaft Application



According to ISO 14025,
EN 15804 and ISO 21930:2017

4.1. Integrated Door Assembly Results

Impact Category	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
CML Impacts (Europe, Rest of World)															
GWP [kg CO2 eq]	4.81E+02	9.92E+00	1.52E+00	0.00E+00	0.00E+00	0.00E+00	9.87E+02	0.00E+00	MND	MND	0.00E+00	8.11E-01	0.00E+00	4.02E-01	MND
ODP [kg CFC 11 eq]	1.83E-11	1.99E-15	3.19E-16	0.00E+00	0.00E+00	0.00E+00	3.66E-11	0.00E+00	MND	MND	0.00E+00	1.62E-16	0.00E+00	1.39E-15	MND
AP [kg SO2 eq]	9.50E-01	1.28E-02	1.28E-03	0.00E+00	0.00E+00	0.00E+00	1.93E+00	0.00E+00	MND	MND	0.00E+00	1.70E-03	0.00E+00	1.62E-03	MND
EP [kg Phosphate eq]	8.55E-02	3.40E-03	8.40E-04	0.00E+00	0.00E+00	0.00E+00	1.81E-01	0.00E+00	MND	MND	0.00E+00	4.63E-04	0.00E+00	3.75E-04	MND
POCP [kg Ethene eq]	1.25E-01	-2.71E-03	2.72E-04	0.00E+00	0.00E+00	0.00E+00	2.44E-01	0.00E+00	MND	MND	0.00E+00	-5.74E-04	0.00E+00	1.56E-05	MND
ADP-elements [kg Sb eq]	2.58E-03	2.89E-06	5.09E-08	0.00E+00	0.00E+00	0.00E+00	5.17E-03	0.00E+00	MND	MND	0.00E+00	2.49E-07	0.00E+00	1.09E-07	MND
ADP-fossil fuel [MJ]	3.99E+03	1.18E+02	2.05E+00	0.00E+00	0.00E+00	0.00E+00	8.25E+03	0.00E+00	MND	MND	0.00E+00	9.59E+00	0.00E+00	4.82E+00	MND
TRACI Impacts (North America)															
AP [kg SO2 eq]	9.91E-01	1.68E-02	2.63E-03	0.00E+00	0.00E+00	0.00E+00	2.03E+00	0.00E+00	MND	MND	0.00E+00	2.31E-03	0.00E+00	2.17E-03	MND
EP [kg N eq]	5.13E-02	2.41E-03	6.82E-04	0.00E+00	0.00E+00	0.00E+00	1.10E-01	0.00E+00	MND	MND	0.00E+00	2.66E-04	0.00E+00	2.62E-04	MND
GWP [kg CO2 eq]	4.81E+02	9.92E+00	1.52E+00	0.00E+00	0.00E+00	0.00E+00	9.87E+02	0.00E+00	MND	MND	0.00E+00	8.11E-01	0.00E+00	4.02E-01	MND
ODP [kg CFC 11 eq]	1.83E-11	1.99E-15	3.19E-16	0.00E+00	0.00E+00	0.00E+00	3.66E-11	0.00E+00	MND	MND	0.00E+00	1.62E-16	0.00E+00	1.39E-15	MND
Resources [MJ]	7.32E+02	1.86E+01	3.41E-01	0.00E+00	0.00E+00	0.00E+00	1.51E+03	0.00E+00	MND	MND	0.00E+00	1.52E+00	0.00E+00	8.11E-01	MND
POCP [kg O3 eq]	1.42E+01	3.72E-01	1.88E-02	0.00E+00	0.00E+00	0.00E+00	2.94E+01	0.00E+00	MND	MND	0.00E+00	5.27E-02	0.00E+00	3.15E-02	MND
Carbon Emissions and Uptake															
BCRP [kg CO2]	2.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
BCEP [kg CO2]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
BCRK [kg CO2]	1.25E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+01	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
BCEK [kg CO2]	0.00E+00	0.00E+00	9.57E-01	0.00E+00	0.00E+00	0.00E+00	1.91E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
BCEW [kg CO2]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
CCE [kg CO2]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
CCR [kg CO2]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
CWNR [kg CO2]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND

ENVIRONMENTAL PRODUCT DECLARATION



Total Door Systems
Integrated Metal Door Assembly with Lite
Kit-Elevator Shaft Application



According to ISO 14025,
EN 15804 and ISO 21930:2017

Impact Category	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
	Resource Use Indicators														
RPR _e [MJ]	4.04E+02	5.51E+00	1.63E-01	0.00E+00	0.00E+00	0.00E+00	8.21E+02	0.00E+00	MND	MND	0.00E+00	4.73E-01	0.00E+00	5.30E-01	MND
RPR _m [MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
RPR _i [MJ]	4.04E+02	5.51E+00	1.63E-01	0.00E+00	0.00E+00	0.00E+00	8.21E+02	0.00E+00	MND	MND	0.00E+00	4.73E-01	0.00E+00	5.30E-01	MND
NRPR _e [MJ]	7.17E+03	1.40E+02	2.70E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+04	0.00E+00	MND	MND	0.00E+00	1.15E+01	0.00E+00	6.37E+00	MND
NRPR _m [MJ]	4.34E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.68E+01	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
NRPR _i [MJ]	7.22E+03	1.40E+02	2.70E+00	0.00E+00	0.00E+00	0.00E+00	1.48E+04	0.00E+00	MND	MND	0.00E+00	1.15E+01	0.00E+00	6.37E+00	MND
SM [kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
RSF [MJ]	1.82E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-12	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
NRSF [MJ]	6.12E-12	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-11	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
RE [MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
FW [m3]	1.24E+00	2.34E-02	1.98E-03	0.00E+00	0.00E+00	0.00E+00	2.54E+00	0.00E+00	MND	MND	0.00E+00	2.02E-03	0.00E+00	8.76E-04	MND
Output Flows and Waste Categories															
HWD [kg]	8.63E-03	1.11E-08	2.36E-10	0.00E+00	0.00E+00	0.00E+00	1.73E-02	0.00E+00	MND	MND	0.00E+00	9.60E-10	0.00E+00	6.03E-10	MND
NHWD [kg]	1.63E+01	1.25E-02	1.54E+00	0.00E+00	0.00E+00	0.00E+00	5.47E+01	0.00E+00	MND	MND	0.00E+00	1.06E-03	0.00E+00	9.49E+00	MND
HLRW [kg]	1.80E-04	4.51E-07	2.49E-08	0.00E+00	0.00E+00	0.00E+00	3.61E-04	0.00E+00	MND	MND	0.00E+00	3.87E-08	0.00E+00	6.15E-08	MND
ILLRW [kg]	1.51E-01	3.80E-04	2.13E-05	0.00E+00	0.00E+00	0.00E+00	3.03E-01	0.00E+00	MND	MND	0.00E+00	3.26E-05	0.00E+00	5.31E-05	MND
CRU [kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
MR [kg]	0.00E+00	0.00E+00	3.10E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+02	0.00E+00	MND	MND	0.00E+00	0.00E+00	5.37E+01	0.00E+00	MND
MER [kg]	0.00E+00	0.00E+00	4.14E-01	0.00E+00	0.00E+00	0.00E+00	8.28E-01	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
EEE [MJ]	0.00E+00	0.00E+00	1.77E+00	0.00E+00	0.00E+00	0.00E+00	3.54E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
EET [MJ]	0.00E+00	0.00E+00	6.58E-01	0.00E+00	0.00E+00	0.00E+00	1.32E+00	0.00E+00	MND	MND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	MND
EE [MJ]	8.63E-03	1.11E-08	2.36E-10	0.00E+00	0.00E+00	0.00E+00	1.73E-02	0.00E+00	MND	MND	0.00E+00	9.60E-10	0.00E+00	6.03E-10	MND



Total Door Systems
Integrated Metal Door Assembly with Lite
Kit-Elevator Shaft Application



According to ISO 14025,
EN 15804 and ISO 21930:2017

5. LCA Interpretation

Among the different life cycle stages, B4 emerges as a major contributor. This follows the fact that with an RSL of 25 years, there are 2 replacements that need to occur during the 75 years of building operation. This includes raw material extraction, manufacturing, distribution, install and end of life (for replaced product) for every replacement. This causes impacts from B4 to overshadow impacts from any other phase in the life cycle. If impacts from B4 were excluded, the largest contributor to impacts is A1-A3 (raw material extraction and manufacturing). This goes back to the energy intensive process of extracting and processing metals to make doors.

6. Additional Environmental Information

6.1. Environment and Health During Manufacturing

Total Door meets all federal and state standards related to the Environment and Health during manufacturing. Beyond what is regulated, there are no additional environment and health considerations during the production of goods.

6.2. Environment and Health During Installation

The installation instruction that can be found on Total Door's website should be referred to and followed to have proper and safe installation.

6.3. Environment and Health During Use

There are no environmental or health considerations during the use of the product.

6.4. Extraordinary Effects

Fire

Total Door Systems' fire rated doors follow ITS/Warnock Hersey specifications and include follow-up service. Testing for fire door assemblies is in compliance with ASTM E152, UL 10C, NFPA 252, and UBC standard 7-2 (1997) parts I and II, as well as with Canadian standard CAN4-S104-M80.IBC. Doors are ADA-compliant and meet all local fire codes. They can be ordered in 1/16" increments for an exact fit to your new or existing opening. All Total Door Systems fire rated (up to three hours) doors feature smoke and draft protection.

Water

Should the product become flooded, the water should be removed by means of extraction and drying and the product should behave as originally intended. There are no environmental impacts associated with the product being flooded.

Mechanical Destruction

If the product is mechanically destroyed, it should be disposed of using standard procedures and replaced in a timely manner.



7. Supporting Documentation

The full text of the acronyms found in Section 4 are found in Table 10.

Table 10: Acronym Key

ACRONYM	TEXT	ACRONYM	TEXT
LCA Indicators			
ADP-elements	Abiotic depletion potential for non-fossil resources	GWP	Global warming potential
ADP-fossil	Abiotic depletion potential for fossil resources	OPD	Depletion of stratospheric ozone layer
AP	Acidification potential of soil and water	POCP	Photochemical ozone creation potential
EP	Eutrophication potential	Resources	Depletion of non-renewable fossil fuels
LCI Indicators			
PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PENRT	Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)
PERM	Use of renewable primary energy resources used as raw materials	SM	Use of secondary materials
PERT	Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	RSF	Use of renewable secondary fuels
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	NRSF	Use of non-renewable secondary fuels
PENRM	Use of non-renewable primary energy resources used as raw materials	FW	Net use of fresh water
HWD	Disposed-of-hazardous waste	MFR	Materials for recycling
NHWD	Disposed-of non-hazardous waste	MET	Materials for energy recovery
RWD	Disposed-of Radioactive waste	EEE	Exported electrical energy
CRU	Components for reuse	EET	Exported thermal energy
		EE	Exported energy

8. References

1. Life Cycle Assessment, Total Door Systems, LCA for EPD Generation Tool Report for Total Door System Doors. WAP Sustainability Consulting. May 2021.
2. Product Category Rules for Building-Related Products and Services Part A: Life Cycle Assessment Calculation Rules and Report Requirements UL – 10010 Version 3.2. UL Environment.
3. PCR for Building-related Products and Services Part B: Commercial Steel Doors and Steel Frames EPD Requirements. UL Environment. Version 2.0. September 2020.
4. ISO 14044: 2006 Environmental Management – Life cycle assessment – Requirements and Guidelines.
5. ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations – Principles and Procedures.
6. ISO 14044: 2006/ Amd 1:2017 Environmental Management – Life cycle assessment – Requirements and Guidelines – Amendment 1.
7. ISO 21930:2017 Sustainability in buildings and civil engineering works – Core rules for environmental product declarations of construction products and services.
8. European Standard DIN EN 15804: 2012.04+A1 2013. Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products (includes Amendment A1:2013)
9. UL Environment General Program Instructions, March 2020, version 2.5.
10. CML-IA Characterization Factors. 5 September 2016.
<https://www.universiteitleiden.nl/en/research/research-output/science/cml-ia-characterisation-factors>
11. TRACI: The Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts. Version 2.1 – User Guide - <https://nepis.epa.gov/Adobe/PDF/P100HN53.pdf>.

CERTIFICATIONS: HEALTH PRODUCT DECLARATION (HPD)



The Health Product Declaration (HPD) Open Standard provides a framework for product manufacturers and their ingredient suppliers to report and disclose information about product contents and associated health information. The HPD Open Standard is a consensus, stakeholder standard, governed by the HPD Collaborative, a not-for-profit member organization.

The HPD Open Standard consists of:

- The HPD Open Standard Format (HPD Format) that presents consistent structural frameworks for the presentation of data elements required for a Health Product Declaration.
- The HPD Open Standard Instructions (HPD Instructions) that define the terms and requirements for the data elements included in the Standard Format, including appendices.
- Best Practices Guidance that is cited in the HPD Instructions and is available on the HPDC website [<https://www.hpd-collaborative.org/emerging-best-practices/>].

A report completed in compliance with the HPD Open Standard is referred to as a “Health Product Declaration,” or “HPD.” HPD reports include Product HPDs, for complete products as delivered to the job site, and Supplier HPDs, for ingredients as delivered to a manufacturer.



Total Door SYSTEMS
Global Leader in Integrated Access Technology®

Integrated Metal Door Assembly with Lite Kit
by Total Door Systems

Health Product
Declaration v2.2

created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 24156
CLASSIFICATION: 08 17 13 Integrated Metal Door Opening Assemblies
PRODUCT DESCRIPTION: The product contains a flush panic exit device, an electromagnetic hold open device and standard closures, gasketing, locking mechanisms, hinges, hardware and a lite kit, The door's body is commercial grade steel while the hardware components can be made of various materials such as aluminum, stainless steel, brass and/or various plastics.

Section 1: Summary Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold level	Residuals/Impurities	All Substances Above the Threshold Indicated Are:
<input type="radio"/> Nested Materials Method	<input type="radio"/> 100 ppm	<input checked="" type="radio"/> Considered	Characterized <input checked="" type="radio"/> Yes Ex/SC <input type="radio"/> Yes <input type="radio"/> No
<input checked="" type="radio"/> Basic Method	<input checked="" type="radio"/> 1,000 ppm	<input type="radio"/> Partially Considered	% weight and role provided for all substances except SC substances characterized according to SC guidance.
Threshold Disclosed Per	<input type="radio"/> Per GHS SDS	<input type="radio"/> Not Considered	Screened <input checked="" type="radio"/> Yes Ex/SC <input type="radio"/> Yes <input type="radio"/> No
<input type="radio"/> Material	<input type="radio"/> Other	Explanation(s) provided for Residuals/Impurities?	All substances screened using Priority Hazard Lists with results disclosed except SC substances screened according to SC guidance.
<input checked="" type="radio"/> Product		<input checked="" type="radio"/> Yes <input type="radio"/> No	Identified <input checked="" type="radio"/> Yes Ex/SC <input type="radio"/> Yes <input type="radio"/> No
			All substances disclosed by Name (Specific or Generic) and Identifier except SC substances identified according to SC guidance.

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY

GREENSCREEN SCORE | HAZARD TYPE

INTEGRATED METAL DOOR ASSEMBLY WITH LITE KIT | IRON, ELEMENTAL LT-P1 | END ALUMINUM BM-1 | END | RES | PHY SODA LIME BOROSILICATE GLASS LT-UNK SC:WOOD Not Screened POLYSTYRENE LT-UNK MANGANESE LT-P1 | END | MUL | REP CHROMIUM LT-P1 | END | SKI | RES SC:ELECTRONIC COMPONENTS Not Screened NICKEL LT-1 | CAN | RES | MAM | MUL | SKI STEEL NoGS ZINC, ELEMENTAL LT-P1 | AQU | END | MUL | PHY SILICON, ELEMENTAL LT-UNK SILICONES NoGS WATER BM-4 COPPER LT-P1 | AQU | MUL |

Number of Greenscreen BM-4/BM3 contents ... 1

Contents highest concern GreenScreen Benchmark or List translator Score ... BM-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

Special conditions applied: BiologicalMaterial, Electronics

[LEED v4] "Yes ex/SC" result is due only to materials and substances for which Special Conditions were applied. Thus "Yes ex/SC" does not disqualify the product for the LEED v4 Materials and Resources Disclosure and Optimization credit, Option 1.

There are two materials that come under special conditions and have been declared as such.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE See Section 3 for additional listings.

VOC emissions: CDPH Standard Method – Not tested

Other: Intertek Warknock Hersey Mark for Steel Fire Doorset - Polystyrene or Mineral core

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients Option 1

Third Party Verified?	PREPARER: Self-Prepared	SCREENING DATE: 2021-03-22
<input type="radio"/> Yes	VERIFIER:	PUBLISHED DATE: 2021-03-22
<input checked="" type="radio"/> No	VERIFICATION #:	EXPIRY DATE: 2024-03-22

Section 2: Content in Descending Order of Quantity

This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold
- Nested Material Inventory method with individual Material-level thresholds

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.2, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-2-standard

INTEGRATED METAL DOOR ASSEMBLY WITH LITE KIT

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Residuals and impurities were collected for all raw materials included in this product. All chemicals that fall above the stated threshold are included in this section.

OTHER PRODUCT NOTES: Substance ranges are provided due to the variable composition of metal alloys and due to size variations of the door. Fasteners to install the product are already included with the product.

IRON, ELEMENTAL

ID: 7439-89-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2021-03-22

%: 85.0000 - 95.0000

GS: LT-P1

RC: UNK

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

END

TEDX - Potential Endocrine Disruptors

Potential Endocrine Disruptor

SUBSTANCE NOTES: This substance is part of the steel alloy matrix. Due to the commodity nature of steel, the status of recycled content is unknown.

ALUMINUM

ID: 7429-90-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2021-03-22

%: 0.0000 - 5.0000

GS: BM-1

RC: UNK

NANO: No

SUBSTANCE ROLE: Alloy element

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

END

TEDX - Potential Endocrine Disruptors

Potential Endocrine Disruptor

RES

AOEC - Asthmagens

Asthmagen (Rs) - sensitizer-induced

PHY

EU - GHS (H-Statements)

H261 - In contact with water releases flammable gases

PHY

EU - GHS (H-Statements)

H228 - Flammable solid

SUBSTANCE NOTES: This substance is part of the aluminum alloy matrix. Due to the commodity nature of aluminum, the status of recycled content is unknown.

SODA LIME BOROSILICATE GLASS

ID: 65997-17-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2021-03-22

%: 0.0000 - 5.0000

GS: LT-UNK

RC: None

NANO: No

SUBSTANCE ROLE: Glass component

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
SUBSTANCE NOTES: This forms part of the lite kit in the integrated metal door assembly.		

SC:WOOD		ID: SC:Bio
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22
%: 0.0000 - 5.0000	GS: Not Screened	RC: None NANO: No SUBSTANCE ROLE: Biological material
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
	Hazard Screening not performed	
SUBSTANCE NOTES: Version: SCBioMats/2018-02-23 Category: Tree-based materials Identifier: Pine This disclosure does not provide information on allergens, hyper-accumulation of metals, production of any toxic substances during normal metabolic activities, pesticides, and other potential hazards or sources of hazards which may be found in certain biological materials.		

POLYSTYRENE		ID: 9003-53-6
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22
%: 0.0000 - 5.0000	GS: LT-UNK	RC: None NANO: No SUBSTANCE ROLE: Insulator
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
SUBSTANCE NOTES: Polystyrene forms the core of the integrated metal door assembly.		

MANGANESE		ID: 7439-96-5
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22
%: 0.0000 - 5.0000	GS: LT-P1	RC: UNK NANO: No SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
REP	GHS - Japan	Toxic to reproduction - Category 1B [H360]
SUBSTANCE NOTES: This substance is part of the steel alloy matrix. Due to the commodity nature of steel, the status of recycled content is unknown.		

CHROMIUM		ID: 7440-47-3
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22

%: 0.0000 - 5.0000
 GS: LT-P1
 RC: UNK
 NANO: No
 SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
SKI	MAK	Sensitizing Substance Sh - Danger of skin sensitization
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced

SUBSTANCE NOTES: This substance is part of the steel alloy matrix. Due to the commodity nature of steel, the status of recycled content is unknown.

SC:ELECTRONIC COMPONENTS

ID: SC:Electronics

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
 HAZARD SCREENING DATE: 2021-03-22

%: 0.0000 - 1.0000
 GS: Not Screened
 RC: None
 NANO: No
 SUBSTANCE ROLE: Electronic component

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
Hazard Screening not performed		

SUBSTANCE NOTES:

Version: SCElec/2018-02-23

Brief Description: The electronic component in this product is an electromagnetic door holder. They are used to hold doors open until released by fire-alarm systems, remote smoke detectors and other such emergency applications.

Compliance: Yes

Takeback Program: No Entry

NICKEL

ID: 7440-02-0

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library
 HAZARD SCREENING DATE: 2021-03-22

%: 0.0000 - 1.0000
 GS: LT-1
 RC: UNK
 NANO: No
 SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	EU - GHS (H-Statements)	H351 - Suspected of causing cancer
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	CA EPA - Prop 65	Carcinogen
CAN	US NIH - Report on Carcinogens	Known to be a human Carcinogen
CAN	IARC	Group 2b - Possibly carcinogenic to humans
RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
CAN	US NIH - Report on Carcinogens	Reasonably Anticipated to be Human Carcinogen
MAM	EU - GHS (H-Statements)	H372 - Causes damage to organs through prolonged or repeated exposure
RES	MAK	Sensitizing Substance Sah - Danger of airway & skin sensitization
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
SKI	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction

SUBSTANCE NOTES: This substance is part of the steel alloy matrix. Due to the commodity nature of steel, the status of recycled content is unknown.

STEEL

ID: 12597-69-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22		
%: 0.0000 - 1.0000	GS: NoGS	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		

SUBSTANCE NOTES: This substance is part of the steel alloy matrix. Due to the commodity nature of steel, the status of recycled content is unknown.

ZINC, ELEMENTAL

ID: 7440-66-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22		
%: 0.0000 - 1.0000	GS: LT-P1	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
AQU	EU - GHS (H-Statements)	H400 - Very toxic to aquatic life
AQU	EU - GHS (H-Statements)	H410 - Very toxic to aquatic life with long lasting effects
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters
PHY	EU - GHS (H-Statements)	H250 - Catches fire spontaneously if exposed to air
PHY	EU - GHS (H-Statements)	H260 - In contact with water releases flammable gases which may ignite spontaneously
SUBSTANCE NOTES: This substance is part of the steel alloy matrix as well as the finish of various components. Due to the commodity nature of steel, the status of recycled content is unknown.		

SILICON, ELEMENTAL

ID: 7440-21-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22		
%: 0.0000 - 1.0000	GS: LT-UNK	RC: UNK	NANO: No	SUBSTANCE ROLE: Alloy element
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: This substance is part of the steel alloy matrix. Due to the commodity nature of steel, the status of recycled content is unknown.				

SILICONES

ID: 63148-53-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22		
%: 0.0000 - 1.0000	GS: NoGS	RC: None	NANO: No	SUBSTANCE ROLE: Sealant
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: A range is given to protect the proprietary nature of the supplier's formulation.				

WATER

ID: 7732-18-5

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22		
%: 0.0000 - 1.0000	GS: BM-4	RC: None	NANO: No	SUBSTANCE ROLE: Adhesive
HAZARD TYPE	AGENCY AND LIST TITLES		WARNINGS	
None found			No warnings found on HPD Priority Hazard Lists	
SUBSTANCE NOTES: A range is given to protect the proprietary nature of the supplier's formulation.				

COPPER

ID: 7440-50-8

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2021-03-22		
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%: **0.0000 - 1.0000** GS: **LT-P1** RC: **UNK** NANO: **No** SUBSTANCE ROLE: **Alloy element**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
AQU	EU - GHS (H-Statements)	H411 - Toxic to aquatic life with long lasting effects
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters

SUBSTANCE NOTES: This substance is part of the steel alloy matrix. Due to the commodity nature of steel, the status of recycled content is unknown.

Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

VOC EMISSIONS	CDPH Standard Method – Not tested		
CERTIFYING PARTY: Self-declared APPLICABLE FACILITIES: N/A CERTIFICATE URL: CERTIFICATION AND COMPLIANCE NOTES:	ISSUE DATE: 2021-03-10	EXPIRY DATE:	CERTIFIER OR LAB: N/A
OTHER	Intertek Warknock Hersey Mark for Steel Fire Doorset -Polystyrene or Mineral core		
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: 6145 Delfield Industrial Dr, Waterford Twp, MI 48329 CERTIFICATE URL: https://totaldoor.com/wp-content/uploads/2019/11/Intertek-Certificate-of-Compliance.pdf CERTIFICATION AND COMPLIANCE NOTES:	ISSUE DATE: 2017-09-01	EXPIRY DATE: 2022-08-31	CERTIFIER OR LAB: Intertek Testing Services NA, Inc.

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

No accessories are required for this product.

Section 5: General Notes

Substance ranges are provided due to the variable composition of metal alloys and due to size variations of the door. Fasteners to install the product are already included with the product.

MANUFACTURER INFORMATION

MANUFACTURER: Total Door Systems
ADDRESS: 6145 Delfield Industrial Dr
Waterford Twp Michigan 48329, USA
WEBSITE: <https://totaldoor.com/>

CONTACT NAME: Patricia Yulkowski
TITLE: President and C.E.O.
PHONE: 800-852-6660 Ext. 103
EMAIL: patricia@totaldoor.com

The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.

KEY**Hazard Types**

AQU Aquatic toxicity	LAN Land toxicity	PHY Physical hazard (flammable or reactive)
CAN Cancer	MAM Mammalian/systemic/organ toxicity	REP Reproductive
DEV Developmental toxicity	MUL Multiple	RES Respiratory sensitization
END Endocrine activity	NEU Neurotoxicity	SKI Skin sensitization/irritation/corrosivity
EYE Eye irritation/corrosivity	NF Not found on Priority Hazard Lists	UNK Unknown
GEN Gene mutation	OZO Ozone depletion	
GLO Global warming	PBT Persistent, bioaccumulative, and toxic	

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-UNK List Translator Benchmark Unknown (the chemical is present on at least one GreenScreen Specified List, but the information contained within the list did not result in a clear mapping to a LT-1 or LTP1 score.)
BM-2 Benchmark 2 (use but search for safer substitutes)	
BM-1 Benchmark 1 (avoid - chemical of high concern)	
BM-U Benchmark Unspecified (due to insufficient data)	
LT-P1 List Translator Possible 1 (Possible Benchmark-1)	NoGS No GreenScreen.

Recycled Types

PreC Pre-consumer recycled content
PostC Post-consumer recycled content
UNK Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms:

GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Inventory Methods:

Nested Method / Material Threshold Substances listed within each material per threshold indicated per material
Nested Method / Product Threshold Substances listed within each material per threshold indicated per product
Basic Method / Product Threshold Substances listed individually per threshold indicated per product

Nano Composed of nano scale particles or nanotechnology

Third Party Verified Verification by independent certifier approved by HPDC

Preparer Third party preparer, if not self-prepared by manufacturer

Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- a method for the assessment of exposure or risk associated with product handling or use,*
- a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.*

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.

Total Door Systems Installation & Fire Code Compliance

With the Total Door Systems product line, the installation instructions and caveats are part of the listed procedure. In other words, violating the Total Door Systems installation instructions voids the label of the opening. If Total Door Systems are not installed to manufacturer's tolerances by a factory-trained installer, the warranty will be void. In the event that a warranty is issued without careful inspection, its issuance is invalid.

If the opening is not labeled, the Fire Marshal is obligated to deny issuance of an occupancy permit. If he is unaware of this, an anonymous communication to UL or Intertek will make the Fire Marshal aware of the condition.

R-Value or U-Factor

Standard construction steel doors have insulating values as follows:

R-Value = measure of the rate at which heat flows through 1sq ft of material = 4.76

U-Factor = measures the resistance to heat flow = .21

Insulating doors should be gasketed to prevent air infiltration.

Sound Transmission Coefficient

Total Door Systems when fully gasketed, will provide a STC (sound transmission coefficient) value as follows: 18-gauge steel x polystyrene core = 33 STC

Fire Labeling Existing Door Frames

Intertek can label existing door frames that are missing labels. On retrofit jobs, you do not have to replace the frame simply to obtain a labeled frame.

Intertek will examine and inspect door frames and if found to be eligible, they will affix a fire rating label to the door frame.

Intertek requests that a representative accompany them to locate the door openings to be inspected. Also, during the inspection, they will require the assistance of a locksmith, door tradesman or building mechanic to provide assistance in fastening labels to the frame by drilling two 1/8" holes and installing drive rivets. Intertek also requests that a local building inspector be on site to observe its examination, inspection and labeling procedures.

You can contact Intertek at: (800) 800-7344 field labeling, (608) 831-9297 Fax

Total Door Systems labels are found on the TOP edge of the door.

Field Undercutting of Labeled Doors

Intertek has ruled that 1-1/2 hour (B), ¾ hour (C), and 20-minute rated steel Total Door Systems may be cut off in the field a maximum of ¾". Three hour (A) label doors may not be cut off at all.

Application of Architectural Overlays and Wood Veneers to Labeled Steel Total Door Systems

Field application of cladding or wood veneers to labeled Total Door Systems will void any fire rating.

Specifications & CAD Drawings



Section 081713 - Integrated Metal Door Opening Assemblies

SafeFrame – Elevator Shaft

Elevator Specification	5.01
CAD Drawing Elevator Pair Hold Open 180°	5.02
CAD Drawing Elevator Single RR Hold Open 180°	5.03
CAD Drawing Elevator Single LR Hold Open 180°	5.04
CAD Drawing Elevator Single RR Hold Open 90°	5.05
CAD Drawing Elevator Single LR Hold Open 90°	5.06

5.01

Pair

Pair Specification	5.07
CAD Drawing Pair Hold Open 180°/90°	5.08
CAD Drawing Pair Hold Open 90°	5.09
CAD Drawing Pair Hold Open 90°/180°	5.10
CAD Drawing Pair Hold Open 180°	5.11

5.07

Double Egress

Double Egress Specification	5.12
CAD Drawing Double Egress Hold Open 180°	5.13
CAD Drawing Double Egress LR Hold Open 90°	5.14
CAD Drawing Double Egress LH Hold Open 90°	5.15
CAD Drawing Double Egress Hold Open 90/180°	5.16
CAD Drawing Double Egress Hold Open 180°/90°	5.17

5.12

Single

Single Specification	5.18
CAD Drawing Single RR Hold Open 180°	5.19
CAD Drawing Single LR Hold Open 180°	5.20
CAD Drawing Single RR Hold Open 90°	5.21
CAD Drawing Single LR Hold Open 90°	5.22

5.18

SafeFrame® Elevator Shaft Application: Part 1: General**1.01 GENERAL NOTE**

- A. The General Conditions, Supplementary General Conditions, and Division 1 - General Requirements are hereby made a part of this Section as fully as if repeated herein.

1.02 SUMMARY

- A. Section Includes
 - 1. Integrated metal door opening assemblies with doors, operating hardware, accessories, and installation for a complete assembly.

1.03 RELATED SECTIONS

- A. Section 01 33 00, Submittal Procedures.
- B. Section 01 25 13, Product Substitution Procedures.

1.04 REFERENCES

- A. ANSI/BHMA A156.32 – Integrated Door Opening Assemblies, 2015.
- B. ANSI/UL 10C -- Positive Pressure Fire Tests of Door Assemblies, American National Standards Institute/Underwriters Laboratories, 2001.
- C. ASTM A1008 - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, American Society of Testing and Materials; 2004a.
- D. NFPA 101 – Life Safety Code, National Fire Protection Association, 2003.
- E. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies, National Fire Protection Association, 2003.
- F. SDI 111 A - Recommended Steel Door Frame Details, Steel Door Institute; 2002.
- G. SDI 112 - Zinc-Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames, Steel Door Institute, 1997.
- H. UL 1784 – Air Leakage Tests for Door Assemblies without an artificial bottom seal, Underwriters Laboratories Inc., 2001 (For Smoke Containment, Enclosed Elevator Lobbies, Fire Service Access Elevator Lobby Doors, Hoistway Opening Protection)
- I. ASME 17.1 2015 – Elevator Code (Assembly 2.11.6.3 section D)

1.05 SYSTEM DESCRIPTION

- A. Performance Requirements
 - 1. Certified to BHMA - A156.32, Integrated Door Opening Assemblies, 2015.

1.06 SUBMITTALS

- A. Shop Drawings
 - 1. In accordance with Section 01 33 00.
 - 2. Indicate each door and frame condition; frame type, profile and installation detail; items of finish hardware, finishes and electrical roughin requirements.
- B. Samples
 - 1. In accordance with Section 01 33 00.
- C. Environmental
 - 1. Submit UL certification for Environmental Product Declaration (EPD).
- D. Performance
 - 1. Submit certification for ANSI/BHMA 156.32
- E. Fire Certificate of Compliance

SafeFrame® Elevator Shaft Application Part 1: General (cont.)**1.07 QUALITY ASSURANCE****A. Qualifications**

1. Manufacturer: Firm with not less than 5 years successful experience in fabrication of integrated metal door opening assemblies with full-height latch/lock and full-height hinge.
2. Supplier: Authorized distributor of manufacturer.
3. Installer: Factory trained.

B. Regulatory Requirements

1. Rated door assemblies shall have been tested to meet conditions of NFPA 252 as required by NFPA 101 section 6-2.3.3.

1.08 DELIVERY, STORAGE AND HANDLING**A. Packaging:** Polyvinyl wrapped, palette by floor, and clearly marked for each opening.**B. Delivery:** Deliver to site in original unopened containers and pallets bearing system manufacturers name, and brand.**C. Store:** Horizontally on level surface, not less than 2 inches off floor in a clean, dry well-ventilated area protected from sunlight, extreme heat, dryness and moisture.**D. Receiving, off loading, and site distribution** should be handled by an authorized Total Door Distributor unless otherwise stipulated by contract. If the G.C. or other entity handles all or any portion of the receiving, off loading, and site distribution, they are held responsible for any and all damages that may result from potential miss handling of the product.**1.09 PROJECT CONDITIONS**

- A.** Do not bring door systems to site until building temperature and humidity ranges are compatible with recommended values for preservation of wood moisture content as listed by AWI AWQS. Building shall be stabilized at 30 to 60 percent humidity.

1.10 WARRANTY

A. Integrated metal door opening assembly: Manufacturer's standard 5 years for interior applications and 2 years for exterior applications warranty against defects in material and workmanship.

- B.** Store doors in a clear, dry ventilated space having controlled temperature and a relative humidity range between 30 and 60 percent. Stack doors flat and off the floor to prevent warpage.

SafeFrame® Elevator Shaft Application: Part 2: Products**2.01 MANUFACTURERS**

- A. Integrated metal door systems
 - 1. Total Door: www.totaldoor.com
 - 2. Substitutions: Refer to Section 01 25 13, Not permitted.
- B. Hardware
 - 1. Total Door: www.totaldoor.com
 - 2. Substitutions: Refer to Section 01 25 13, Not permitted.

2.02 MATERIALS

- A. Frames
 - 1. SafeFrame by Total Door (Add to system schedule).
 - 2. In accordance with ANSI/SDI A250.8, SDI 111A, and SDI 112.
 - 3. Construction: KD
 - 4. Material: Steel, cold rolled, ASTM A1008, 16 gauge.
 - 5. Fire Resistance Rating: Where indicated in Contract Documents for doors.
- B. Frame Anchorage Devices
 - 1. To securely fasten to wall construction without distortion or stress.
 - 2. In accordance with fire resistance rating indicated in Contract Documents.
- C. Integrated Door Assembly
 - 1. In accordance with ANSI/SDI A250.8.
 - a. Stiles: Steel, galvanized, 16 gauge, spot welded.
 - b. Top and Bottom Rails: 5-1/2 inch 18 gauge steel rails.
 - c. Cores:
 - 1. Solid polystyrene continuously bonded to faces.
 - 2. Temperature Rise.
 - d. Thickness: 1-3/4 inches.
 - e. Faces: Steel, stretcher leveled, without seams or spot welds, galvanized 20 gauge.
 - f. Weld pattern: Enhanced in accordance with manufacturer's standard details.
 - 3. Gasketing
 - a. Door System: Factory applied to locking channel
 - b. Frame: Factory supplied, field apply to head of frame.
 - c. Floor: Factory supplied Surface Smoke Seal to be field applied. (must be ordered with elevator shaft & lobby applications)

2.03 FINISHES

- A. Hinge and Locking Channel
 - 1. Finish: Factory Pre-Finished.
 - a. **Color to be selected by Architect.**
- B. Door Faces, Interior
 - 1. Finish: **To be selected by Architect, refer to door schedule.**
- C. SafeFrame
 - 1. Finish: Factory Pre-Finished.
 - a. **Color to be selected by Architect.**

*Recommend hinge, locking channel, and SafeFrame to be painted the same color to allow the system to blend with surrounding areas.

SafeFrame® Elevator Shaft Application:
Part 3: Execution**3.01 EXAMINATION**

- A. Field Conditions
 - 1. Prior to commencing installation, examine parts of building structure, which are to receive door systems and component parts.
 - 2. Report, in writing, conditions which would prevent proper execution or endanger permanency of the work to the Architect.
- B. Field Dimensions
 - 1. Where possible, verify frame tolerances before fabrication of door systems.
 - 2. Notify Architect of variances with reviewed shop drawings.
- C. Corrective measures, when necessary, shall be determined and approved prior to commencing fabrication.
- D. Coordinate door opening assembly details with adjacent work to assure proper attachments, clean junctions, etc.

3.02 INSTALLATION

- A. Install work in accordance with Contract Documents and reviewed shop drawings.
 - 1. Install door systems and hardware in accordance with manufacturer's recommendations.
 - 2. Installer: Factory trained.
 - 3. Deliver frames to be installed by others.
- B. Integrated Door Assembly
 - 1. Hang to maintain manufacturer's installation tolerances.
 - 2. Adjust to freely swing without binding, sticking, or sagging, and to eliminate excessive clearances.
- C. Hardware: When installation is otherwise complete, adjust hardware for proper operation and function.

Section 081713 - Integrated Metal Door Opening Assemblies**SafeFrame® Elevator Shaft Application:**
Part 4: System Schedule**Set 90° Single Hold Open**

1 ea	Full Height Hinges	H-13 Rigidized	Color TBD	Total Door
1 ea	Full Height Latch Channel	L-11	Color TBD	Total Door
1 ea	Operating Pulls	M32	628	Total Door
1 ea	Exit Device/insert to match skin	PF200 (Flush Panic)	628	Total Door
1 ea	Closer	TDC96P	Alum	Total Door
1 ea	Mag Holder	TDH100		Total Door
1 ea	Surface mounted smoke seal	W60		Total Door
1 ea	Positive Pressure label (confirm rating with door schedule)			Total Door
1 ea	Vision Panel	N Lite with FIRELITE NT		Total Door
	As required by ASME 17.1 Elevator Code 2015			
1 ea	SafeFrame	TDWMF	Color TBD	Total Door

Set 180° Single Hold Open

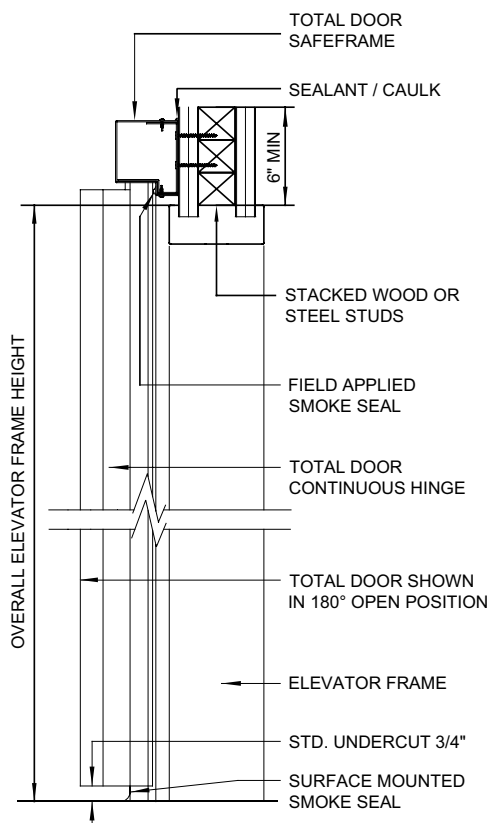
1 ea	Full Height Hinges	H-13	Color TBD	Total Door
1 ea	Full Height Latch Channel	L-11	Color TBD	Total Door
1 ea	Operating Pulls	M32	628	Total Door
1 ea	Exit Device/insert to match skin	PF200 (Flush Panic)	628	Total Door
1 ea	Closer	TDC8907	Alum	Total Door
1 ea	Mag Holder	TDH100		Total Door
1 ea	Surface mounted smoke seal	W60		Total Door
1 ea	Positive Pressure label (confirm rating with door schedule)			Total Door
1 ea	Vision Panel	N Lite with FIRELITE NT		Total Door
	As required by ASME 17.1 Elevator Code 2015			
1 ea	SafeFrame	TDWMF	Color TBD	Total Door

Set 180° Pair Hold Open

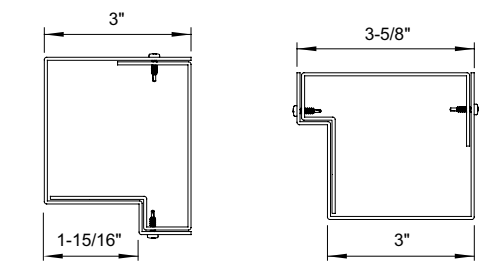
2 ea	Full Height Hinges	H-13	Color TBD	Total Door
2 ea	Full Height Latch Channel	L-11	Color TBD	Total Door
2 ea	Operating Pulls	M32	628	Total Door
2 ea	Exit Device/insert to match skin	PF200 (Flush Panic)	628	Total Door
2 ea	Closer	TDC8907	Alum	Total Door
2 ea	Mag Holder	TDH100		Total Door
2 ea	Surface mounted smoke seal	W60		Total Door
2 ea	Positive Pressure label (confirm rating with door schedule)			Total Door
1 ea	Vision Panel	N Lite with FIRELITE NT		Total Door
	As required by ASME 17.1 Elevator Code 2015			
1 ea	SafeFrame	TDWMF	Color TBD	Total Door

Section 081713 - Integrated Metal Door Opening Assemblies

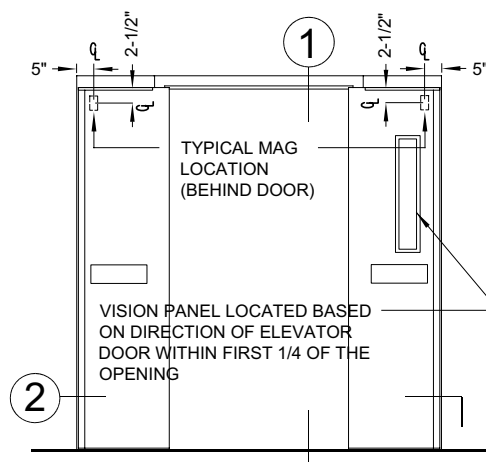
5.02



1 VERTICAL SECTION
NOT TO SCALE

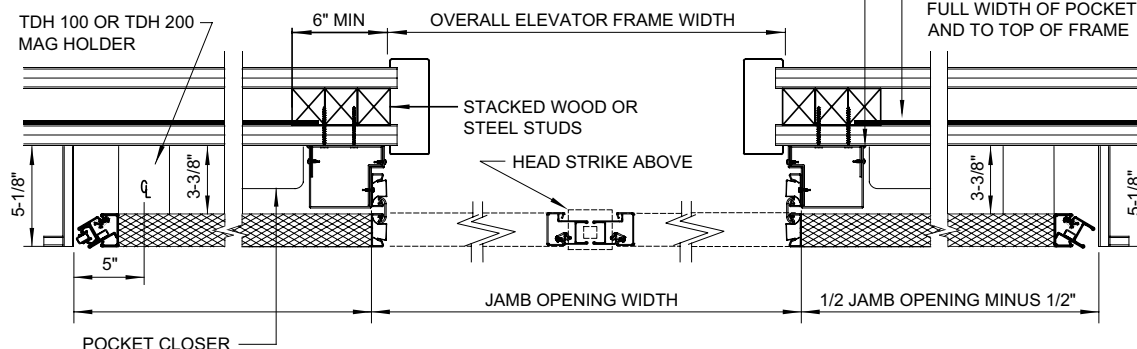


HEAD PROFILE **JAMB PROFILE**
NOTE: SAFEFRAME BY TOTAL DOOR



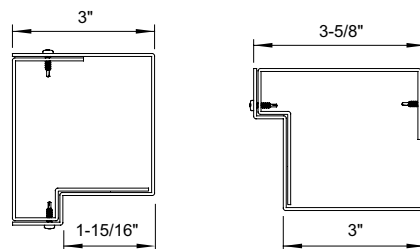
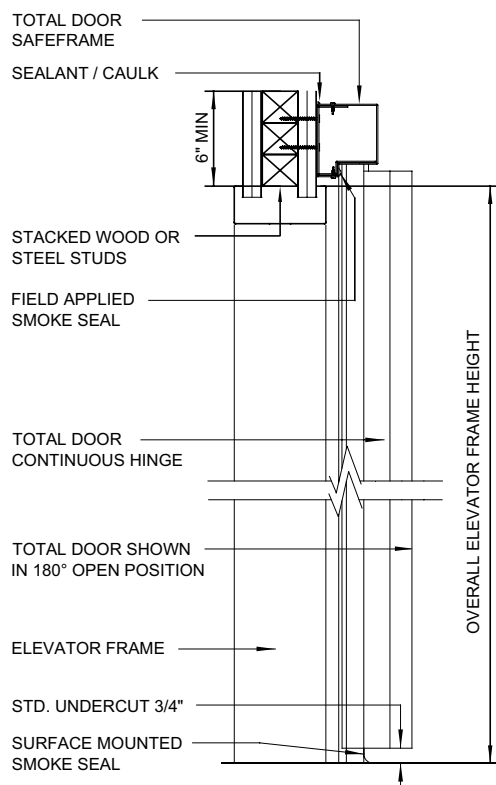
ELEVATION
NOT TO SCALE

JUNCTION BOX ONLY REQUIRED FOR TDH200 MAG LOCATED 5" FROM END OF POCKET AND 2-1/2" DOWN FROM TOP OF DOOR



2 HORIZONTAL SECTION
NOT TO SCALE

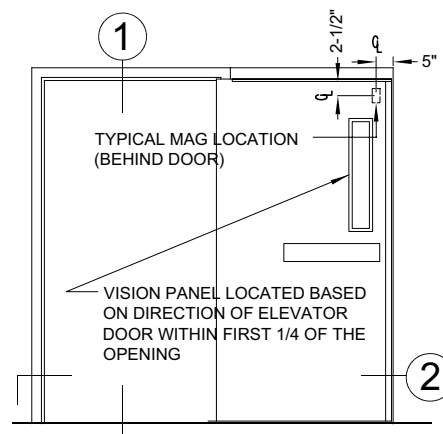
JAMB WIDTH = OVERALL ELEVATOR FRAME WIDTH + 2"
JAMB HEIGHT = OVERALL ELEVATOR FRAME HEIGHT + 1"



HEAD PROFILE

JAMB PROFILE

NOTE: SAFEFRAME BY TOTAL DOOR



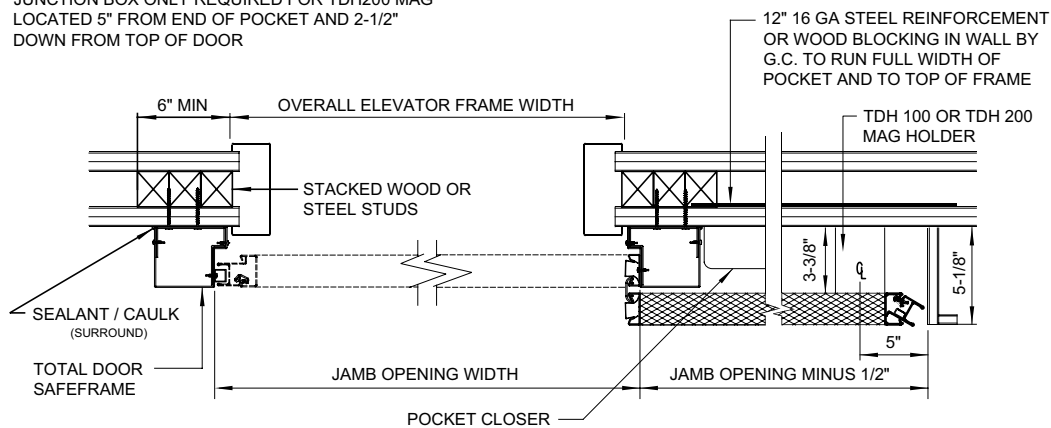
1 VERTICAL SECTION

NOT TO SCALE

ELEVATION

NOT TO SCALE

JUNCTION BOX ONLY REQUIRED FOR TDH200 MAG
LOCATED 5" FROM END OF POCKET AND 2-1/2"
DOWN FROM TOP OF DOOR



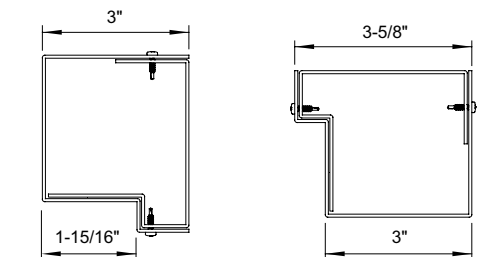
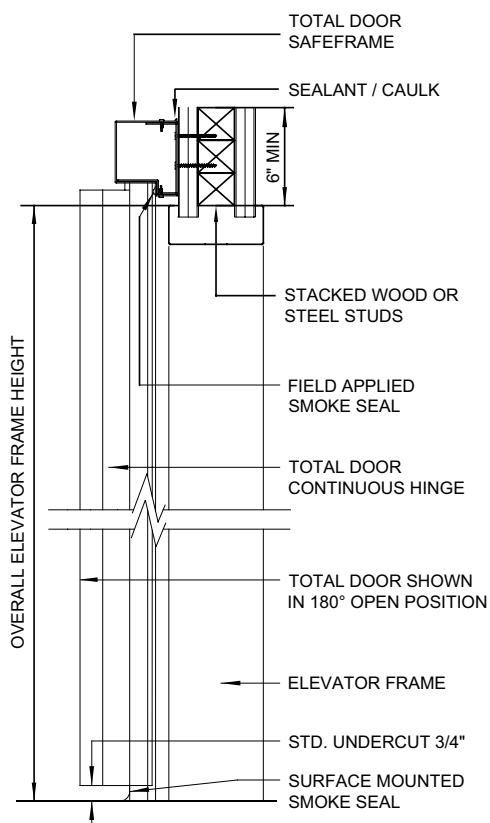
2 HORIZONTAL SECTION

NOT TO SCALE

JAMB WIDTH = OVERALL ELEVATOR FRAME WIDTH + 2"
JAMB HEIGHT = OVERALL ELEVATOR FRAME HEIGHT + 1"

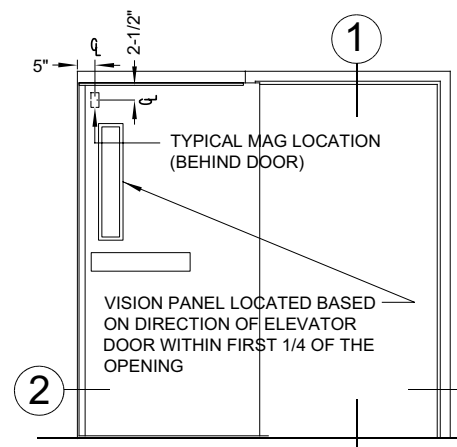
Section 081713 - Integrated Metal Door Opening Assemblies

5.04



HEAD PROFILE JAMB PROFILE

NOTE: SAFEFRAME BY TOTAL DOOR



ELEVATION

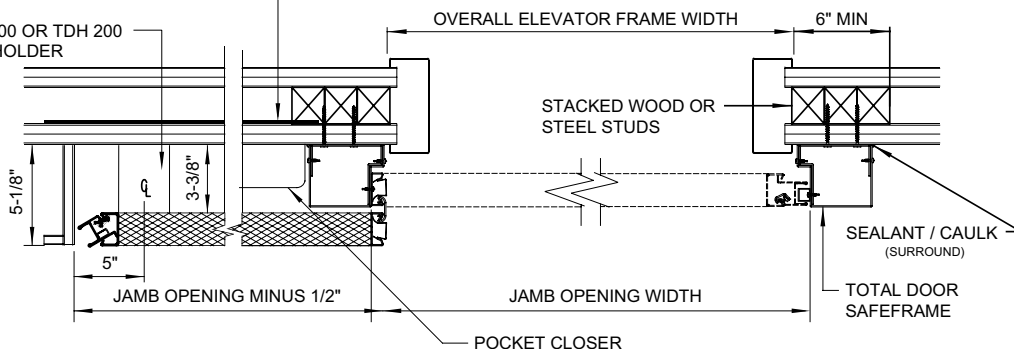
NOT TO SCALE

1 VERTICAL SECTION

NOT TO SCALE

12" 16 GA STEEL REINFORCEMENT OR WOOD BLOCKING IN WALL BY G.C. TO RUN FULL WIDTH OF POCKET AND TO TOP OF FRAME

TDH 100 OR TDH 200 MAG HOLDER

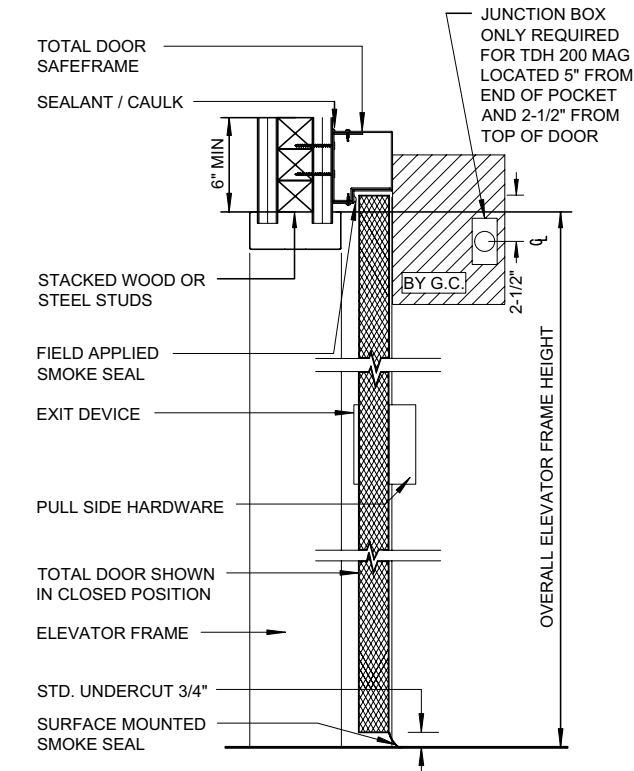


JUNCTION BOX ONLY REQUIRED FOR TDH200 MAG LOCATED 5" FROM END OF POCKET AND 2-1/2" DOWN FROM TOP OF DOOR

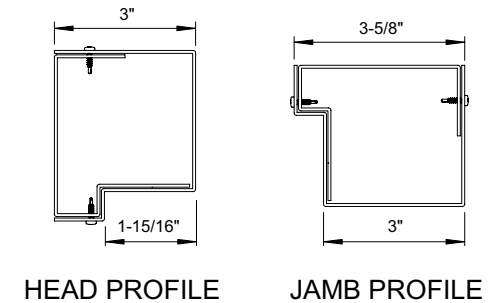
2 HORIZONTAL SECTION

NOT TO SCALE

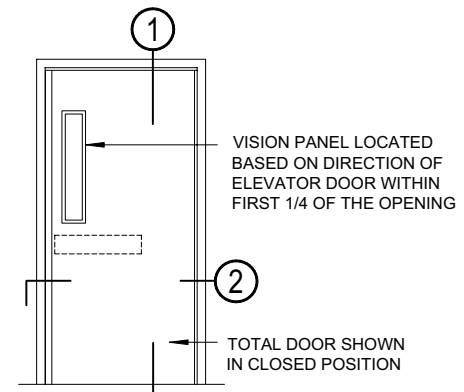
JAMB WIDTH = OVERALL ELEVATOR FRAME WIDTH + 2"
JAMB HEIGHT = OVERALL ELEVATOR FRAME HEIGHT + 1"



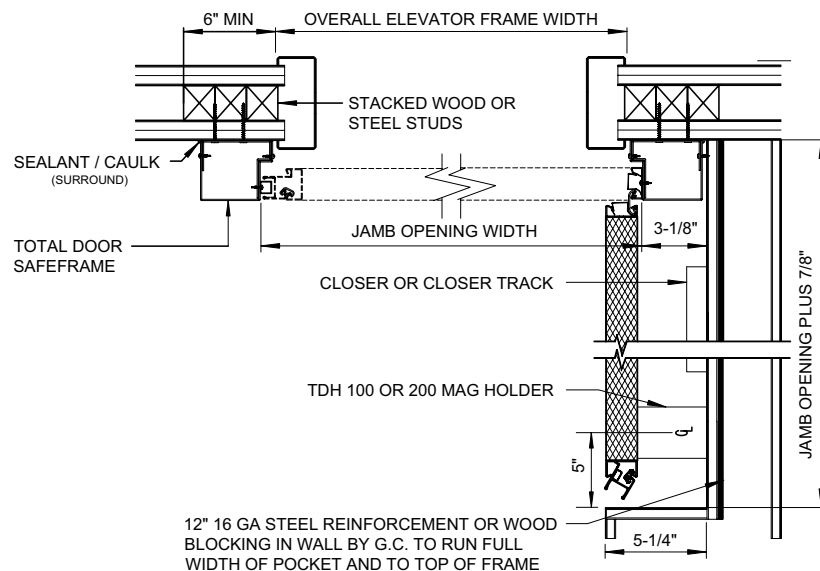
1 VERTICAL SECTION
NOT TO SCALE



NOTE: SAFEFRAME BY TOTAL DOOR



ELEVATION
NOT TO SCALE

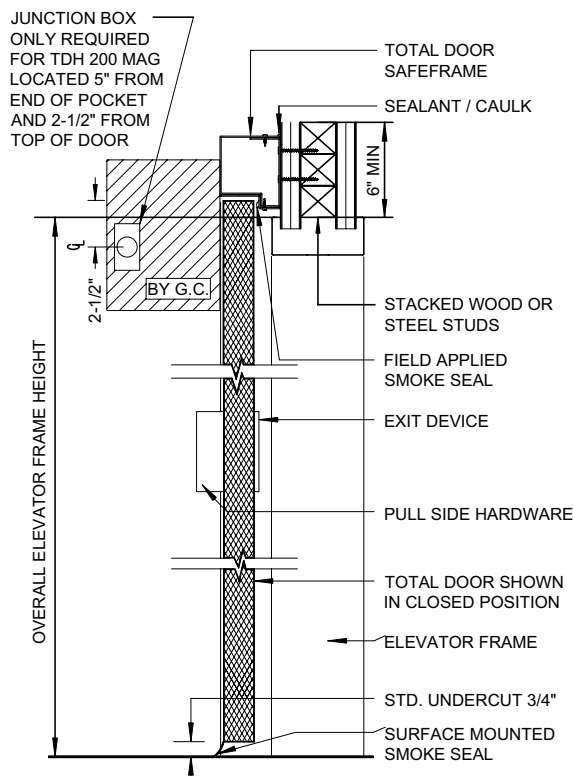


2 HORIZONTAL SECTION
NOT TO SCALE

JAMB WIDTH = OVERALL ELEVATOR FRAME WIDTH + 2"
JAMB HEIGHT = OVERALL ELEVATOR FRAME HEIGHT + 1"

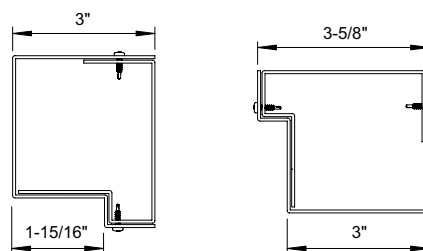
Section 081713 - Integrated Metal Door Opening Assemblies

5.06



1 VERTICAL SECTION

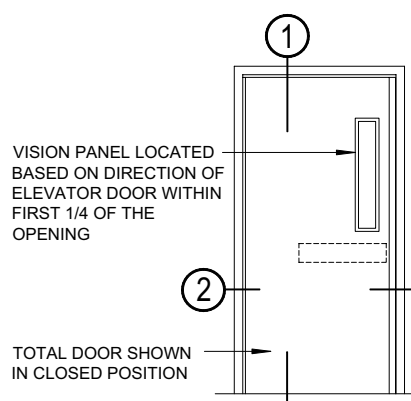
NOT TO SCALE



HEAD PROFILE

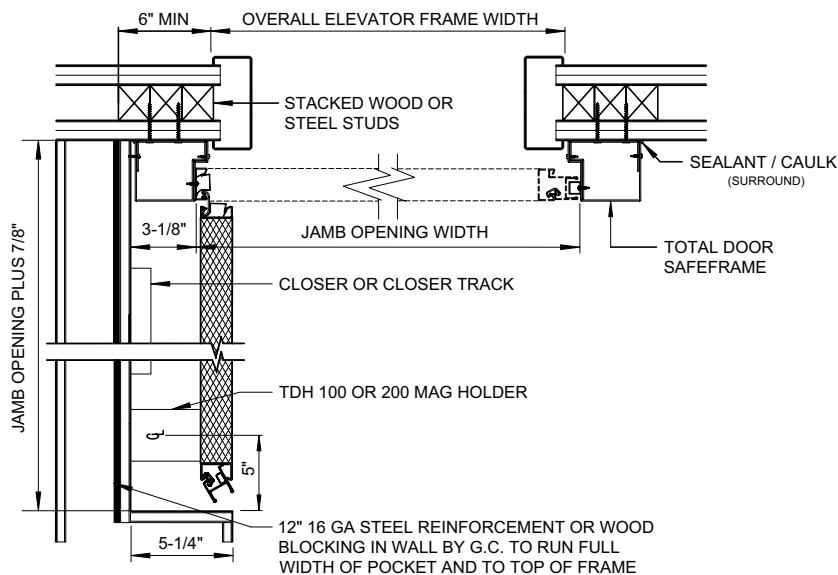
JAMB PROFILE

NOTE: SAFEFRAME BY TOTAL DOOR



ELEVATION

NOT TO SCALE



2 HORIZONTAL SECTION

NOT TO SCALE

JAMB WIDTH = OVERALL ELEVATOR FRAME WIDTH + 2"
JAMB HEIGHT = OVERALL ELEVATOR FRAME HEIGHT + 1"

Section 081713 - Integrated Metal Door Opening Assemblies**Pair Application: Part 1: General****1.01 GENERAL NOTE**

- A. The General Conditions, Supplementary General Conditions, and Division 1 General Requirements are hereby made a part of this Section as fully as if repeated herein.

1.02 SUMMARY

- A. Section Includes
 - 1. Integrated metal door opening assemblies with doors, operating hardware, accessories, and installation for a complete assembly.

1.03 RELATED SECTIONS

- A. Section 01 33 00, Submittal Procedures.
- B. Section 01 25 13, Product Substitution Procedures.

1.04 REFERENCES

- A. ANSI/BHMA A156.32 – Integrated Door Opening Assemblies, 2015.
- B. ANSI/UL 10C -- Positive Pressure Fire Tests of Door Assemblies, American National Standards Institute/Underwriters Laboratories, 2001.
- C. ASTM A1008 - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, American Society of Testing and Materials; 2004a.
- D. NFPA 101 – Life Safety Code, National Fire Protection Association, 2003.
- E. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies, National Fire Protection Association, 2003.
- F. SDI 111 A - Recommended Steel Door Frame Details, Steel Door Institute; 2002.
- G. SDI 112 - Zinc-Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames, Steel Door Institute, 1997.
- H. UL 305 - Standard for Panic Hardware, Underwriters Laboratories Inc., 1997
- I. UL 1784 – Air Leakage Tests for Door Assemblies without an artificial bottom seal, Underwriters Laboratories Inc., 2001 (For Smoke Containment, Enclosed Elevator Lobbies, Fire Service Access Elevator Lobby Doors, Hoistway Opening Protection).

1.05 SYSTEM DESCRIPTION

- A. Performance Requirements
 - 1. Certified to BHMA – A156.32, Integrated Door Opening Assemblies, 2015.

1.06 SUBMITTALS

- A. Shop Drawings
 - 1. In accordance with Section 01 33 00.
 - 2. Indicate each door and frame condition; frame type, profile and installation detail; items of finish hardware, finishes and electrical roughin requirements.
- B. Samples
 - 1. In accordance with Section 01 33 00.
- C. Environmental
 - 1. Submit UL certification to Environmental Product Declaration (EPD).
- D. Performance
 - 1. Submit certification for ANSI/BHMA 156.32.
- E. Fire Certificate of Compliance

Pair Application: Part 1: General (cont.)**1.07 QUALITY ASSURANCE****A. Qualifications**

1. Manufacturer: Firm with not less than 5 years successful experience in fabrication of integrated metal door opening assemblies with full-height latch/lock and full-height hinge.
2. Supplier: Authorized distributor of manufacturer.
3. Installer: Factory trained.

B. Regulatory Requirements

1. Rated door assemblies shall have been tested to meet conditions of NFPA 252 as required by NFPA 101 section 6-2.3.3.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Packaging: Polyvinyl wrapped, palette by floor, and clearly marked for each opening.
- B. Delivery: Deliver to site in original unopened containers and pallets bearing system manufacturers name, and brand.
- C. Store: Horizontally on level surface, not less than 2 inches off floor in a clean, dry well-ventilated area protected from sunlight, extreme heat, dryness and moisture.
- D. Receiving, off loading, and site distribution should be handled by an authorized Total Door Distributor unless otherwise stipulated by contract. If the G.C. or other entity handles all or any portion of the receiving, off loading, and site distribution, they are held responsible for any and all damages that may result from potential miss handling of the product.

1.09 PROJECT CONDITIONS

- A. Do not bring door systems to site until building temperature and humidity ranges are compatible with recommended values for preservation of wood moisture content as listed by AWI AWQS. Building shall be stabilized at 30 to 60 percent humidity.

1.10 WARRANTY

- A. Integrated metal door opening assembly: Manufacturer's standard 5 year warranty against defects in material and workmanship. Refer to Manufacturer's published warranty.
- B. Store doors in a clear, dry ventilated space having controlled temperature and a relative humidity range between 30 and 60 percent. Stack doors flat and off the floor to prevent warpage.

Section 081713 - Integrated Metal Door Opening Assemblies**Pair Application: Part 2: Products****2.01 MANUFACTURERS**

- A. Integrated metal door systems
 - 1. Total Door: www.totaldoor.com
 - 2. Substitutions: Refer to Section 01 25 13, Not permitted.
- B. Hardware
 - 1. Total Door: www.totaldoor.com
 - 2. Substitutions: Refer to Section 01 25 13, Not permitted.

2.02 MATERIALS

- A. Frames
 - 1. To be supplied by others.
 - 2. In accordance with ANSI/SDI A250.8, SDI 111A, and SDI 112.
 - 3. Construction: KD or All-welded unit, type.
 - 4. Material: Steel, cold rolled, ASTM A1008, 16 gauge.
 - 5. Fire Resistance Rating: Where indicated in Contract Documents for doors.
 - 6. Spreader Bar: Removable, at sill (For all welded type).
- B. Frame Anchorage Devices
 - 1. To securely fasten to wall construction without distortion or stress.
 - 2. In accordance with fire resistance rating indicated in Contract Documents.
- C. Integrated Door Assembly
 - 1. Integrated Door Assembly
 - a. Stiles: Steel, galvanized, 16 gauge, spot welded.
 - b. Top and Bottom Rails: 5-1/2 inch 18 gauge steel rails.
 - c. Cores:
 - 1. Solid polystyrene continuously bonded to faces.
 - 2. Temperature Rise.
 - d. Thickness: 1-3/4 inches.
 - e. Faces: Steel, stretcher leveled, without seams or spot welds, galvanized 20 gauge.
 - f. Weld pattern: Enhanced in accordance with manufacturer's standard details.
 - 2. Gasketing
 - a. Door System: Factory applied to locking channel
 - b. Frame: Factory supplied, field apply to head of frame.
 - c. Floor: Factory supplied Surface Smoke Seal to be field applied. (must be ordered with elevator shaft & lobby applications)

2.03 FINISHES

- A. Hinge and Locking Channel
 - 1. Finish: Factory Pre-Finished.
 - a. **Color to be selected by Architect.**
- B. Door Faces, Interior
 - 1. Finish: **To be selected by Architect, refer to door schedule.**

Pair Application: Part 3: Execution**3.01 EXAMINATION**

- A. Field Conditions
 - 1. Prior to commencing installation, examine parts of building structure, which are to receive door systems and component parts.
 - 2. Report, in writing, conditions which would prevent proper execution or endanger permanency of the work to the Architect.
- B. Field Dimensions
 - 1. Where possible, verify frame tolerances before fabrication of door systems.
 - 2. Notify Architect of variances with reviewed shop drawings.
- C. Corrective measures, when necessary, shall be determined and approved prior to commencing fabrication.
- D. Coordinate door opening assembly details with adjacent work to assure proper attachments, clean junctions, etc.

3.02 INSTALLATION

- A. Install work in accordance with Contract Documents and reviewed shop drawings.
 - 1. Install door systems and hardware in accordance with manufacturer's recommendations.
 - 2. Installer: Factory trained.
- B. Frames: Installed by others
 - 1. Set plumb and square in accordance with DHI standards.
 - a. Out-of-square at frame head: Not to exceed 1/16 inch.
 - b. Out-of-plumb for each frame jamb: Not to exceed 1/16 inch.
 - c. Out-of-alignment for each side in plan: Not to exceed 1/16 inch.
 - d. Twist dimension: °Not to exceed 1/16 inch.
 - 2. Brace until adjacent wall is constructed.
 - 3. Securely anchor to adjacent wall.
 - 4. Furnish and install clips, fastenings, and anchorages and conceal unless otherwise noted.
- C. Integrated Door Assembly
 - 1. Hang to maintain manufacturer's installation tolerances.
 - 2. Adjust to freely swing without binding, sticking, or sagging, and to eliminate excessive clearances.
- D. Hardware: When installation is otherwise complete, adjust hardware for proper operation and function.

Section 081713 - Integrated Metal Door Opening Assemblies**Pair Application: Part 4: System Schedule****Set 90° Hold Open**

2 ea	Full Height Hinges	H-13 Rigidized	Color TBD	Total Door
2 ea	Full Height Latch Channel	L-11	Color TBD	Total Door
2 ea	Operating Pulls	M32	628	Total Door
2 ea	Exit Device/insert to match skin	PF 200 (Flush Panic)	628	Total Door
2 ea	Closer	TDC 96P-2	Alum	Total Door
2 ea	Mag Holder	TDH 100	Alum	Total Door
2 ea	Positive Pressure label (confirm rating with door schedule) (Stairwells may require a temperature rise rating)			Total Door

Set 180° Hold Open

2 ea	Full Height Hinges	H-13	Color TBD	Total Door
2 ea	Full Height Latch Channel	L-11	Color TBD	Total Door
2 ea	Operating Pulls	M32	628	Total Door
2 ea	Exit Device/insert to match skin	PF 200 (Flush Panic)	628	Total Door
2 ea	Closer	TDC 8907	Alum	Total Door
2 ea	Mag Holder	TDH 100	Alum	Total Door
2 ea	Positive Pressure label (confirm rating with door schedule) (Stairwells may require a temperature rise rating) (Elevator lobby doors will require a smoke seal (W60) certified to UL1784 w/out an artificial bottom seal)			Total Door

Set 90/180° – 180/90° Hold Open

2 ea	Full Height Hinges	H-13 Rigidized (1)	Color TBD	Total Door
2 ea	Full Height Latch Channel	L-11	Color TBD	Total Door
2 ea	Operating Pulls	M32	628	Total Door
2 ea	Exit Device/insert to match skin	PF 200 (Flush Panic)	628	Total Door
1 ea	Closer	TDC 96P-2	Alum	Total Door
1 ea	Closer	TDC 8907	Alum	Total Door
2 ea	Mag Holder	TDH 100	Alum	Total Door
2 ea	Positive Pressure label (confirm rating with door schedule) (Stairwells may require a temperature rise rating) (Elevator lobby doors will require a smoke seal (W60) certified to UL1784 w/out an artificial bottom seal)			Total Door

Section 081713 - Integrated Metal Door Opening Assemblies

1" MIN. CLEARANCE REQUIRED FROM CEILING
OR TOP OF POCKET TO FRAME RABBET

12" 16 GA STEEL
REINFORCEMENT OR
WOOD BLOCKING IN
WALL BY G.C. TO
RUN FULL WIDTH OF
POCKET AND TO TOP
OF FRAME

BY G.C.

JUNCTION BOX
ONLY REQUIRED
FOR TDH 200 MAG
LOCATED 5" FROM
END OF POCKET
AND 2-1/2" FROM
TOP OF DOOR

EXIT DEVICE

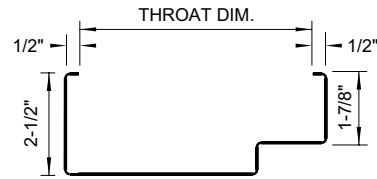
PULL SIDE HARDWARE

DOOR POCKET

TOTAL DOOR SHOWN
IN CLOSED POSITION

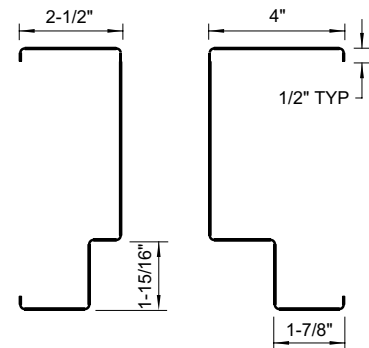
STD. UNDERCUT 3/4"

CONCRETE SLAB



HEAD PROFILE

NOT TO SCALE

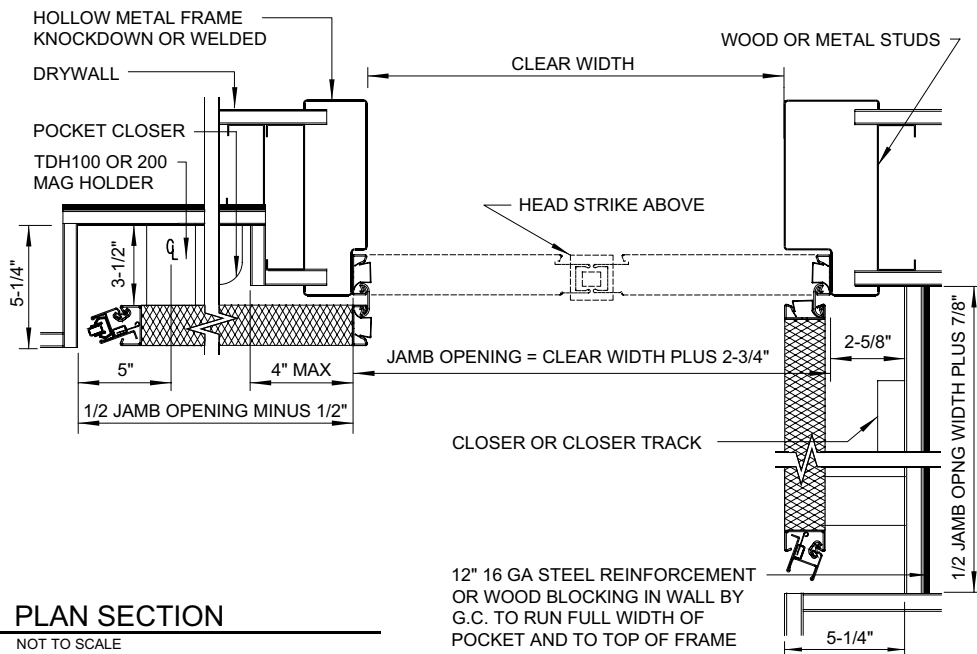


JAMB PROFILE

NOT TO SCALE

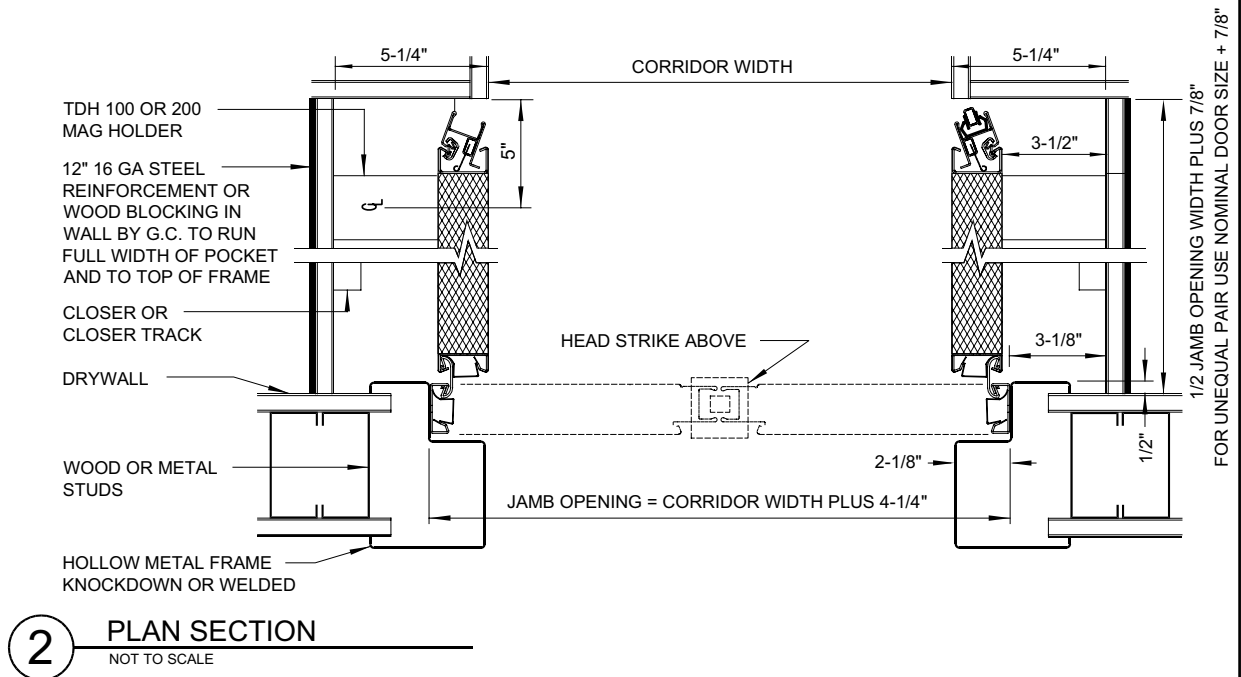
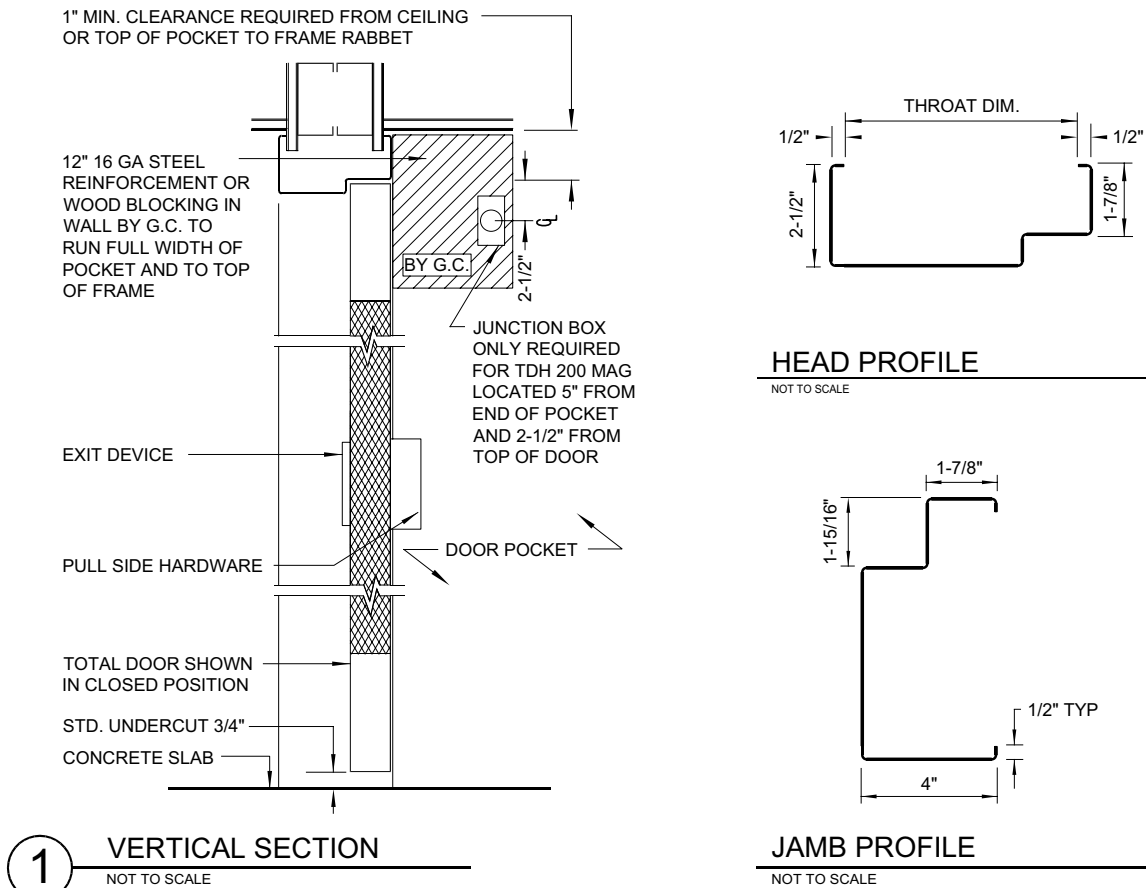
1 VERTICAL SECTION

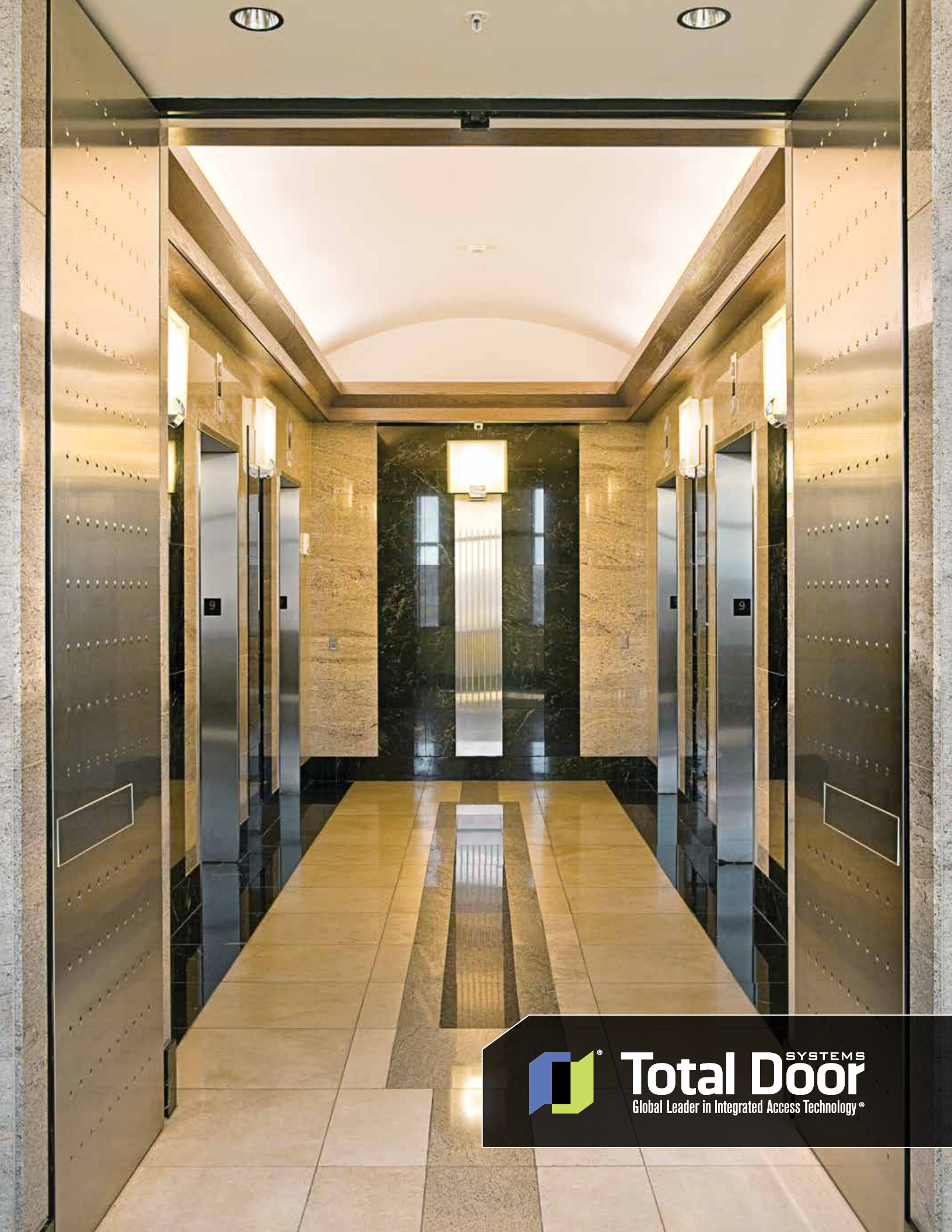
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2 PLAN SECTION

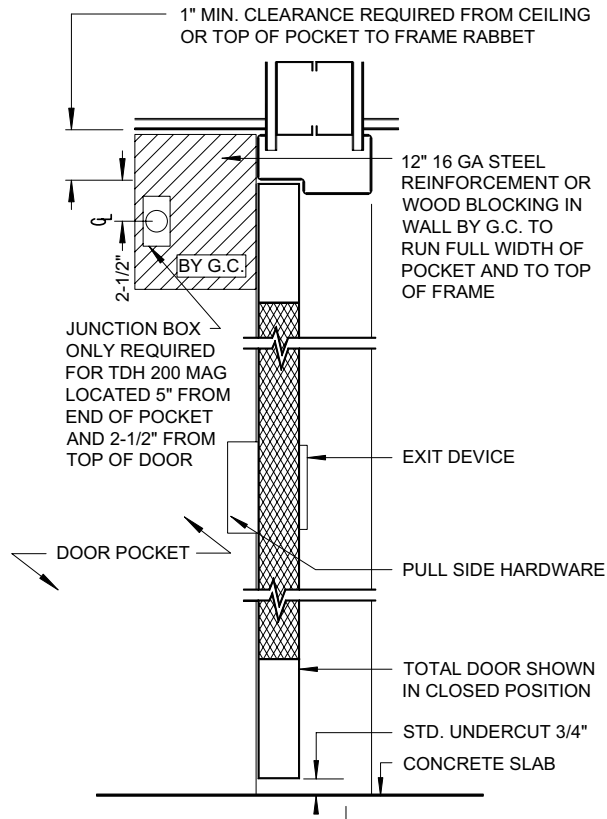
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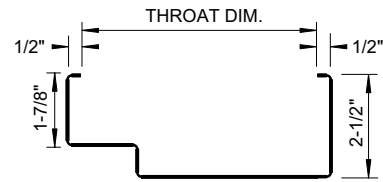


Total Door SYSTEMS
Global Leader in Integrated Access Technology®

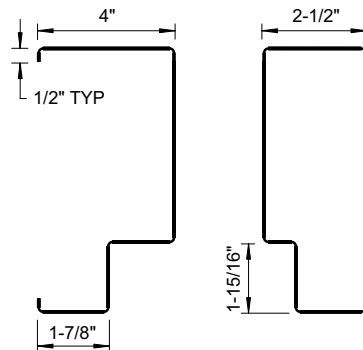
Section 081713 - Integrated Metal Door Opening Assemblies



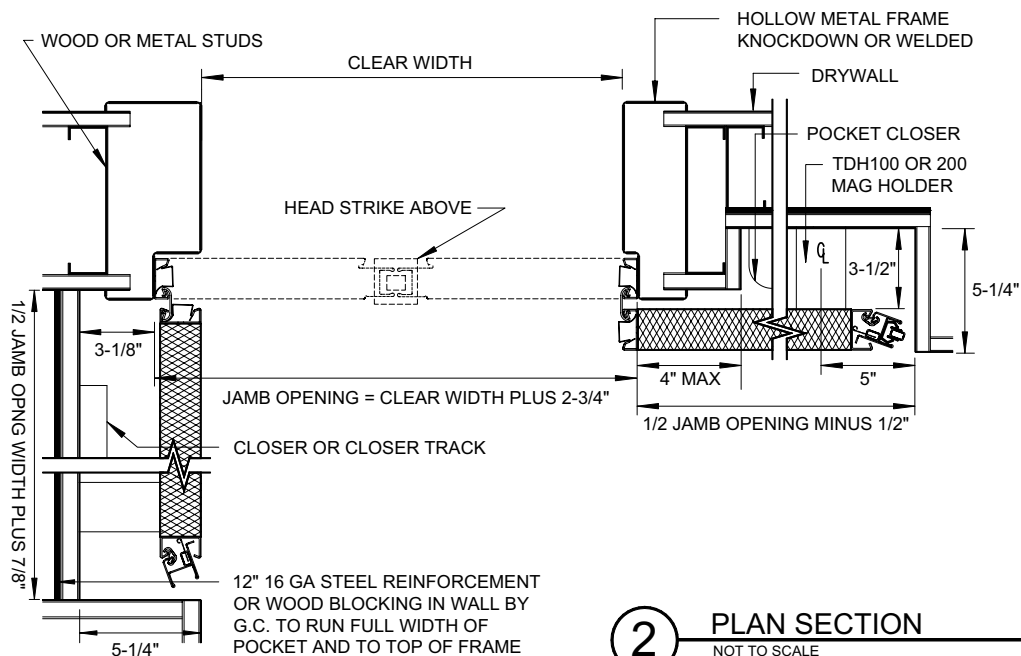
1 VERTICAL SECTION
NOT TO SCALE



HEAD PROFILE
NOT TO SCALE



JAMB PROFILE
NOT TO SCALE



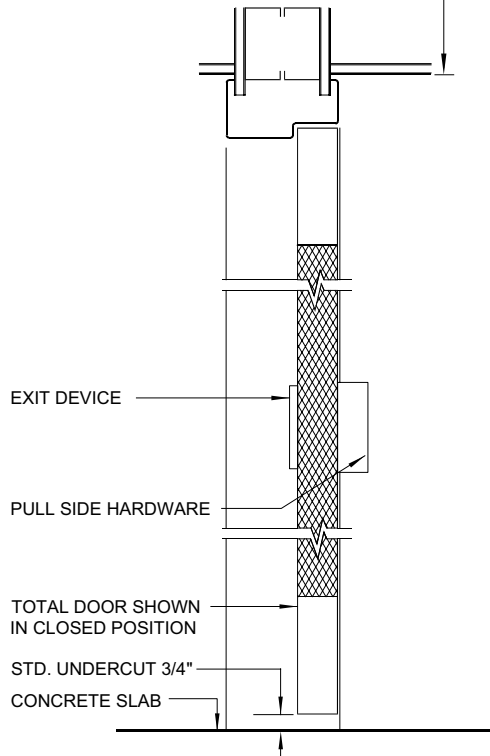
2 PLAN SECTION
NOT TO SCALE

5.11

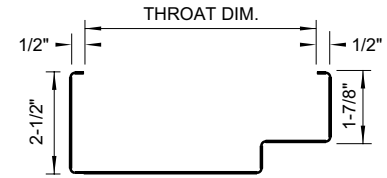
Section 5 - Specifications & CAD Drawings:

Integrated Metal Door Opening Assemblies - **Section 081713**

1" MIN. CLEARANCE REQUIRED FROM CEILING
OR TOP OF POCKET TO FRAME RABBET

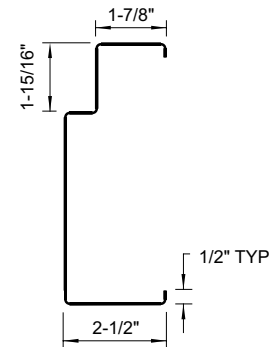


1 VERTICAL SECTION
NOT TO SCALE



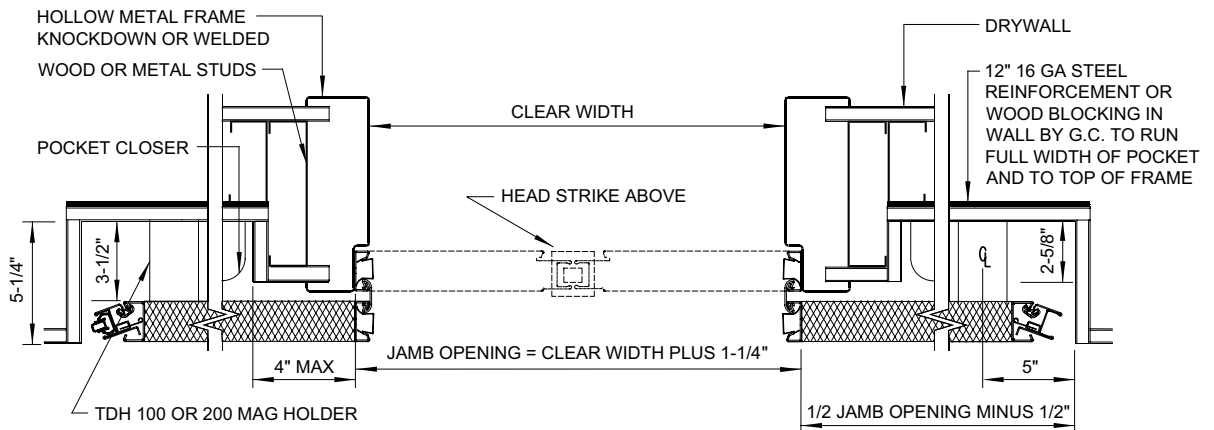
HEAD PROFILE

NOT TO SCALE



JAMB PROFILE

NOT TO SCALE



2 PLAN SECTION
NOT TO SCALE

Sheet No - PR-H0-180

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Section 081713 - Integrated Metal Door Opening Assemblies**Double Egress Application: Part 1: General****1.01 GENERAL NOTE**

- A. The General Conditions, Supplementary General Conditions, and Division 1 - General Requirements are hereby made a part of this Section as fully as if repeated herein.

1.02 SUMMARY

- A. Section Includes
 - 1. Integrated metal door opening assemblies with doors, operating hardware, accessories, and installation for a complete assembly.

1.03 RELATED SECTIONS

- A. Section 01 33 00, Submittal Procedures.
- B. Section 01 25 13, Product Substitution Procedures.

1.04 REFERENCES

- A. ANSI/BHMA A156.32 – Integrated Door Opening Assemblies, 2015.
- B. ANSI/UL 10C -- Positive Pressure Fire Tests of Door Assemblies, American National Standards Institute/Underwriters Laboratories, 2001.
- C. ASTM A1008 - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, American Society of Testing and Materials; 2004a.
- D. NFPA 101 – Life Safety Code, National Fire Protection Association, 2003.
- E. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies, National Fire Protection Association, 2003.
- F. SDI 111 A - Recommended Steel Door Frame Details, Steel Door Institute; 2002.
- G. SDI 112 - Zinc-Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames, Steel Door Institute, 1997.
- H. UL 1784 – Air Leakage Tests for Door Assemblies without an artificial bottom seal, Underwriters Laboratories Inc., 2001 (For Smoke Containment, Enclosed Elevator Lobbies, Fire Service Access Elevator Lobby Doors, Hoistway Opening Protection).

1.05 SYSTEM DESCRIPTION

- A. Performance Requirements
 - 1. Certified to BHMA - A156.32, Integrated Door Opening Assemblies, 2015.

1.06 SUBMITTALS

- A. Shop Drawings
 - 1. In accordance with Section 01 33 00.
 - 2. Indicate each door and frame condition; frame type, profile and installation detail; items of finish hardware, finishes and electrical roughin requirements.
- B. Samples
 - 1. In accordance with Section 01 33 00.
- C. Environmental
 - 1. Submit UL certification to Environmental Product Declaration (EPD).
- D. Performance
 - 1. Submit certification for ANSI/BHMA 156.32
- E. Fire Certificate of Compliance

Double Egress Application Part 1: General (cont.)**1.07 QUALITY ASSURANCE****A. Qualifications**

1. Manufacturer: Firm with not less than 5 years successful experience in fabrication of integrated metal door opening assemblies with full-height latch/lock and full-height hinge.
2. Supplier: Authorized distributor of manufacturer.
3. Installer: Factory trained.

B. Regulatory Requirements

1. Rated door assemblies shall have been tested to meet conditions of NFPA 252 as required by NFPA 101 section 6-2.3.3.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Packaging: Polyvinyl wrapped, palette by floor, and clearly marked for each opening.
- B. Delivery: Deliver to site in original unopened containers and pallets bearing system manufacturers name, and brand.
- C. Store: Horizontally on level surface, not less than 2 inches off floor in a clean, dry well-ventilated area protected from sunlight, extreme heat, dryness and moisture.
- D. Receiving, off loading, and site distribution should be handled by an authorized Total Door Distributor unless otherwise stipulated by contract. If the G.C. or other entity handles all or any portion of the receiving, off loading, and site distribution, they are held responsible for any and all damages that may result from potential miss handling of the product.

1.09 PROJECT CONDITIONS

- A. Do not bring door systems to site until building temperature and humidity ranges are compatible with recommended values for preservation of wood moisture content as listed by AWI AWQS. Building shall be stabilized at 30 to 60 percent humidity.

1.10 WARRANTY

- A. Integrated metal door opening assembly: Manufacturer's standard 5 year warranty against defects in material and workmanship. Refer to Manufacturer's published warranty.
- B. Store doors in a clear, dry ventilated space having controlled temperature and a relative humidity range between 30 and 60 percent. Stack doors flat and off the floor to prevent warpage.

Section 081713 - Integrated Metal Door Opening Assemblies**Double Egress Application: Part 2: Products****2.01 MANUFACTURERS**

- A. Integrated metal door systems
 - 1. Total Door: www.totaldoor.com
 - 2. Substitutions: Refer to Section 01 25 13, Not permitted.
- B. Hardware
 - 1. Total Door: www.totaldoor.com
 - 2. Substitutions: Refer to Section 01 25 13, Not permitted.

2.02 MATERIALS

- A. Frames
 - 1. To be supplied by others.
 - 2. In accordance with ANSI/SDI A250.8, SDI 111A, and SDI 112.
 - 3. Construction: Allwelded unit, type.
 - 4. Material: Steel, cold rolled, ASTM A1008, 16 gauge.
 - 5. Fire Resistance Rating: Where indicated in Contract Documents for doors.
 - 6. Spreader Bar: Removable, at sill (For all welded type).
- B. Frame Anchorage Devices
 - 1. To securely fasten to wall construction without distortion or stress.
 - 2. In accordance with fire resistance rating indicated in Contract Documents.
- C. Integrated Door Assembly
 - 1. Integrated Door Assembly
 - a. Stiles: Steel, galvanized, 16 gauge, spot welded.
 - b. Top and Bottom Rails: 5-1/2 inch 18 gauge steel rails.
 - c. Cores:
 - 1. Solid polystyrene continuously bonded to faces.
 - 2. Temperature Rise.
 - d. Thickness: 1-3/4 inches.
 - e. Faces: Steel, stretcher leveled, without seams or spot welds, galvanized 20 gauge.
 - f. Weld pattern: Enhanced in accordance with manufacturer's standard details.
 - 3. Gasketing
 - a. Door System: Factory applied to locking channel
 - b. Frame: Factory supplied, field apply to head of frame.
 - c. Floor: Factory supplied Surface Smoke Seal to be field applied. (must be ordered with elevator shaft & lobby applications)

2.03 FINISHES

- A. Hinge and Locking Channel
 - 1. Finish: Factory Pre-Finished.
 - a. **Color to be selected by Architect.**
- B. Door Faces, Interior
 - 1. Finish: **To be selected by Architect, refer to door schedule.**

2.04 EXECUTION

Double Egress Application: Part 3: Execution**3.01 EXAMINATION**

- A. Field Conditions
 - 1. Prior to commencing installation, examine parts of building structure, which are to receive door systems and component parts.
 - 2. Report, in writing, conditions which would prevent proper execution or endanger permanency of the work to the Architect.
- B. Field Dimensions
 - 1. Where possible, verify frame tolerances before fabrication of door systems.
 - 2. Notify Architect of variances with reviewed shop drawings.
- C. Corrective measures, when necessary, shall be determined and approved prior to commencing fabrication.
- D. Coordinate door opening assembly details with adjacent work to assure proper attachments, clean junctions, etc.

3.02 INSTALLATION

- A. Install work in accordance with Contract Documents and reviewed shop drawings.
 - 1. Install door systems and hardware in accordance with manufacturer's recommendations.
 - 2. Installer: Factory trained.
- B. Frames: Installed by others
 - 1. Set plumb and square in accordance with DHI standards.
 - a. Out-of-square at frame head: Not to exceed 1/16 inch.
 - b. Out-of-plumb for each frame jamb: Not to exceed 1/16 inch.
 - c. Out-of-alignment for each side in plan: Not to exceed 1/16 inch.
 - d. Twist dimension: Not to exceed 1/16 inch.
 - 2. Brace until adjacent wall is constructed.
 - 3. Securely anchor to adjacent wall.
 - 4. Furnish and install clips, fastenings, and anchorages and conceal unless otherwise noted.
- C. Integrated Door Assembly
 - 1. Hang to maintain manufacturer's installation tolerances.
 - 2. Adjust to freely swing without binding, sticking, or sagging, and to eliminate excessive clearances.
- D. Hardware: When installation is otherwise complete, adjust hardware for proper operation and function.

Section 081713 - Integrated Metal Door Opening Assemblies**Double Egress Application: Part 4: System Schedule****Set Double Egress 90° Hold Open**

2 ea	Full Height Hinges	H-13 Rigidized	Color TBD	Total Door
2 ea	Full Height Latch Channel	L- 11	Color TBD	Total Door
2 ea	Exit Device/insert to match skin	PF 200 (Flush Panic)	628	Total Door
2 ea	Closer	TDC 96P-2	Alum	Total Door
2 ea	Mag Holders	TDH 100		Total Door
2 ea	Positive Pressure label (confirm rating with door schedule) (Stairwells may require a temperature rise rating) (Elevator lobby doors will require a smoke seal (W60) certified to UL1784 w/out an artificial bottom seal)			Total Door

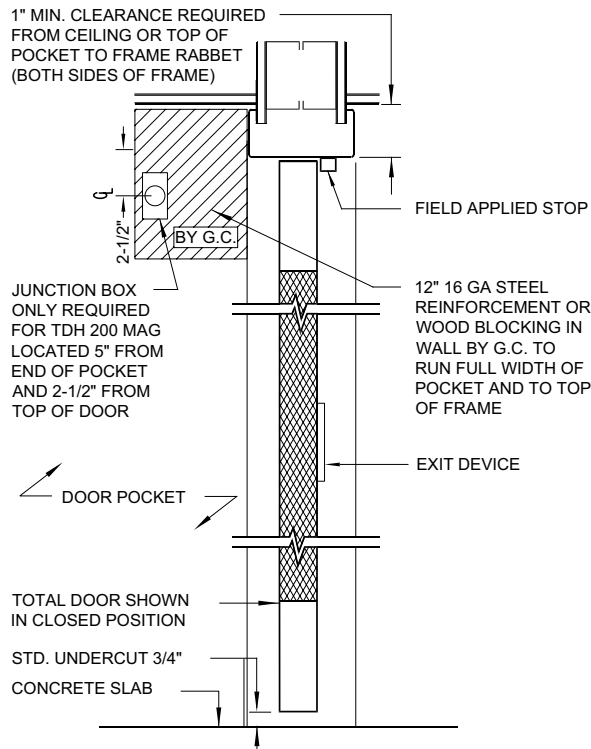
Set Double Egress 180° Hold Open

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2 ea	Full Height Latch Channel	L- 11	Color TBD	Total Door
2 ea	Exit Device/insert to match skin	PF 200 (Flush Panic)	628	Total Door
2 ea	Closer	TDC 8907	Alum	Total Door
2 ea	Mag Holder	TDH 100		Total Door
2 ea	Positive Pressure label (confirm rating with door schedule) (Stairwells may require a temperature rise rating) (Elevator lobby doors will require a smoke seal (W60) certified to UL1784 w/out an artificial bottom seal)			Total Door

Set Double Egress 90/180° – 180/90° Hold Open

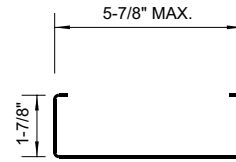
2 ea	Full Height Hinges	H-13 Rigidized (1)	Color TBD	Total Door
2 ea	Full Height Latch Channel	L- 11	Color TBD	Total Door
2 ea	Exit Device/insert to match skin	PF200 (Flush Panic)	628	Total Door
1 ea	Closer	TDC 96P-2	Alum	Total Door
1 ea	Closer	TDC 8907	Alum	Total Door
2 ea	Mag Holder	TDH 100		Total Door
2 ea	Positive Pressure label (confirm rating with door schedule) (Stairwells may require a temperature rise rating) (Elevator lobby doors will require a smoke seal (W60) certified to UL1784 w/out an artificial bottom seal)			Total Door

Section 081713 - Integrated Metal Door Opening Assemblies



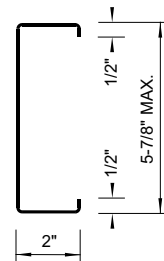
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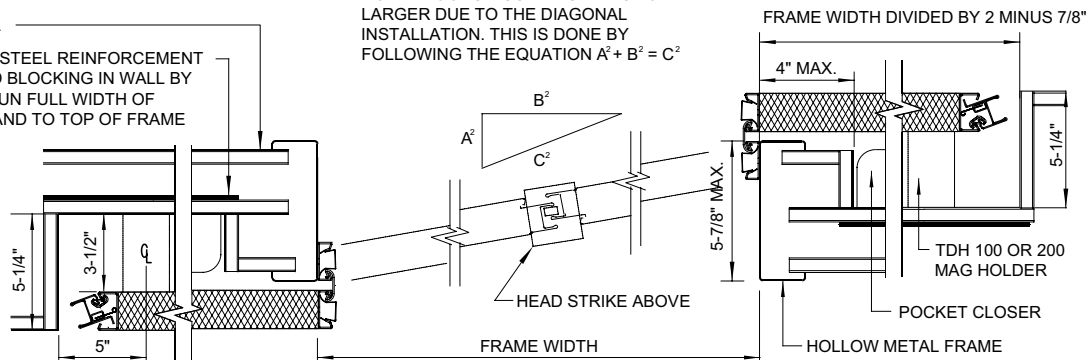
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DRYWALL

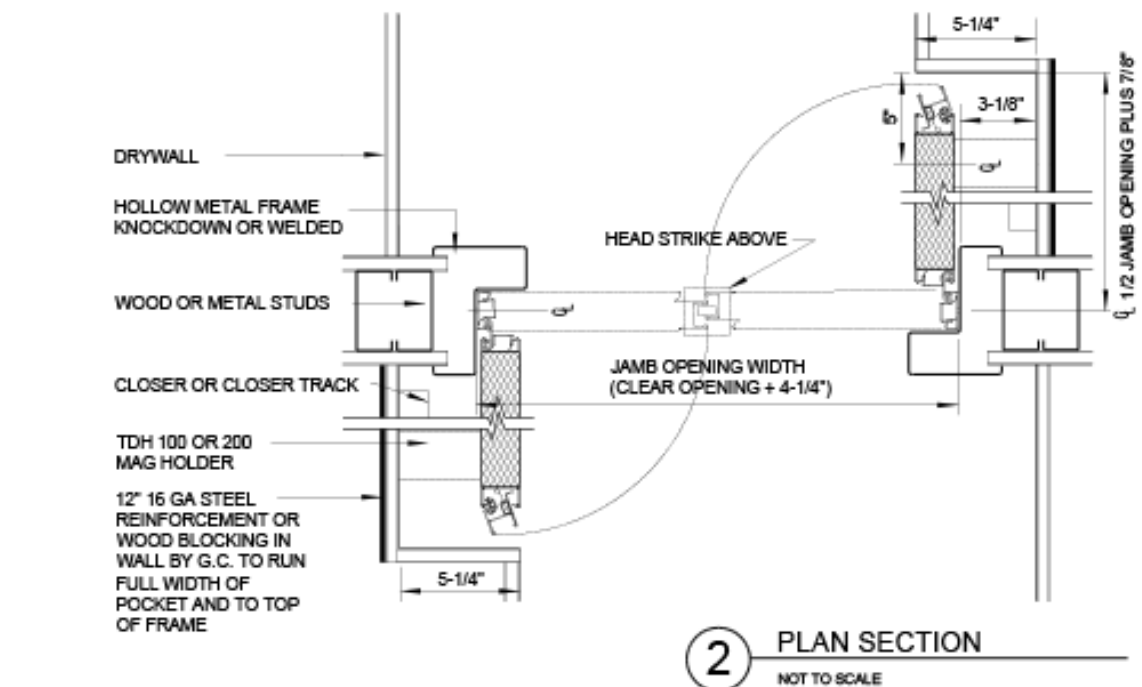
12" 16 GA STEEL REINFORCEMENT OR WOOD BLOCKING IN WALL BY G.C. TO RUN FULL WIDTH OF POCKET AND TO TOP OF FRAME

NOTE: DOORS MUST BE SIZED SLIGHTLY LARGER DUE TO THE DIAGONAL INSTALLATION. THIS IS DONE BY FOLLOWING THE EQUATION $A^2 + B^2 = C^2$

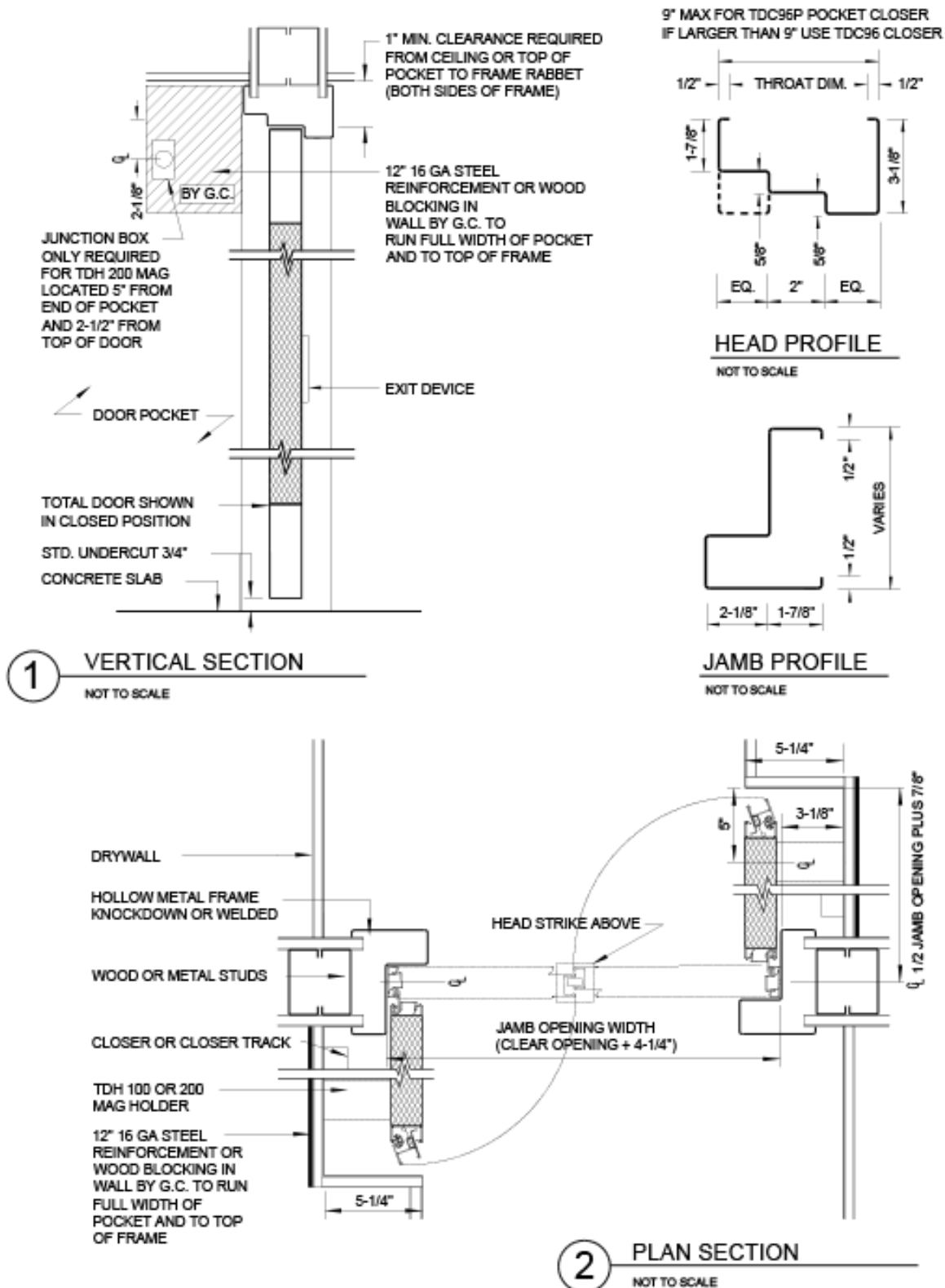


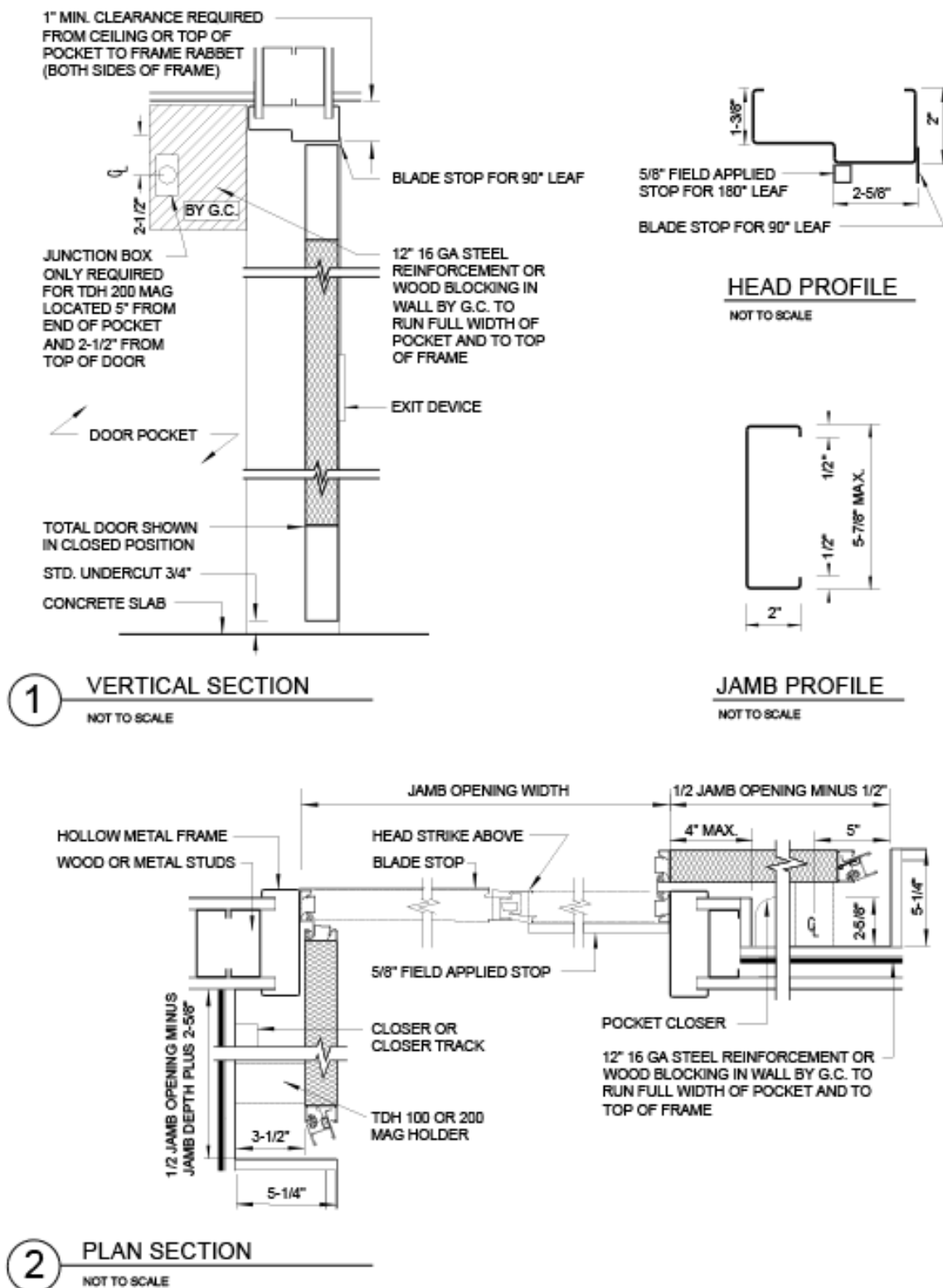
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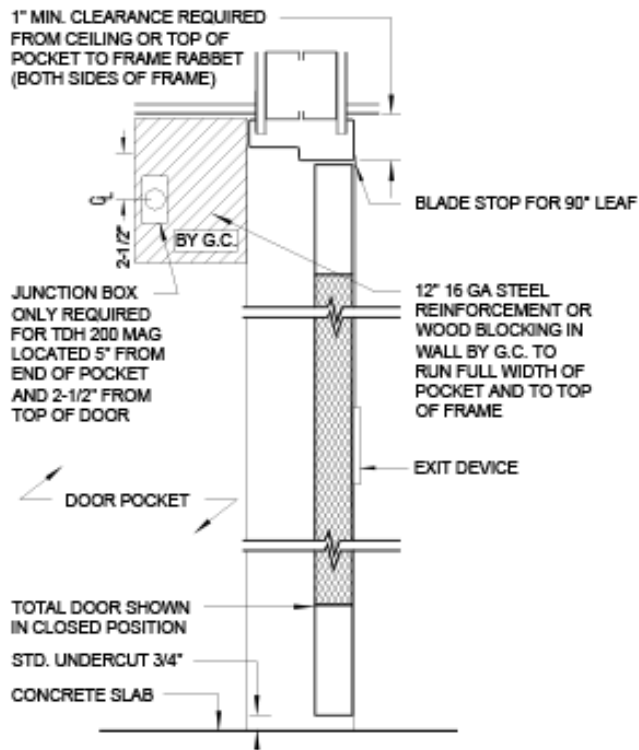


Section 081713 - Integrated Metal Door Opening Assemblies

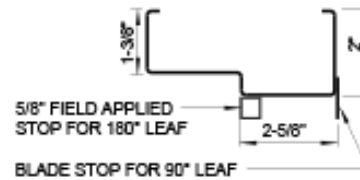




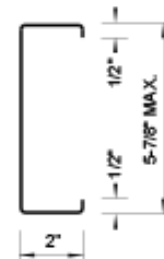
Section 081713 - Integrated Metal Door Opening Assemblies



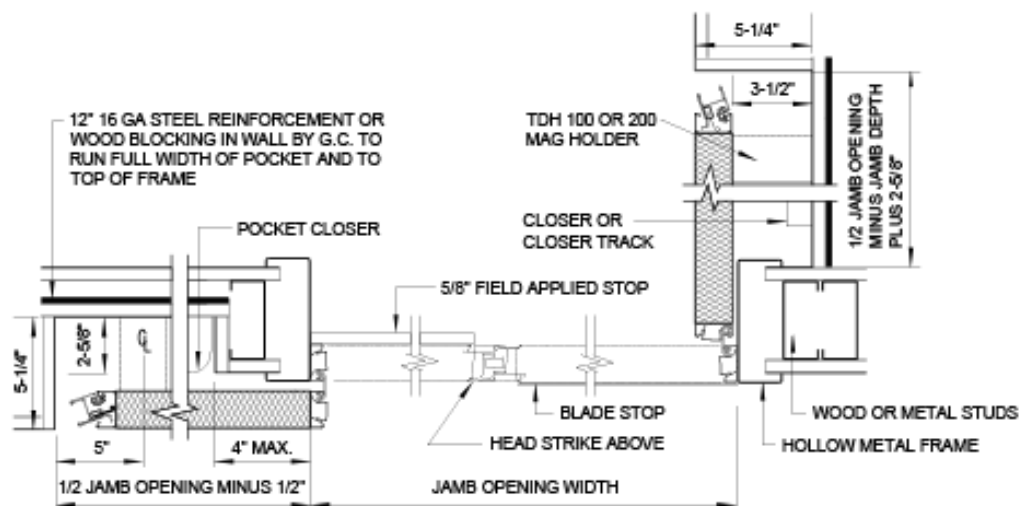
1 VERTICAL SECTION
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2 PLAN SECTION
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Section 081713 - Integrated Metal Door Opening Assemblies**Single Application: Part 1: General****1.01 GENERAL NOTE**

- A. The General Conditions, Supplementary General Conditions, and Division 1 General Requirements are hereby made a part of this Section as fully as if repeated herein.

1.02 SUMMARY

- A. Section Includes
 - 1. Integrated metal door opening assemblies with doors, operating hardware, accessories, and installation for a complete assembly.

1.03 RELATED SECTIONS

- A. Section 01 33 00, Submittal Procedures.
- B. Section 01 25 13, Product Substitution Procedures.

1.04 REFERENCES

- A. ANSI/BHMA A156.32 – Integrated Door Opening Assemblies, 2015.
- B. ANSI/UL 10C -- Positive Pressure Fire Tests of Door Assemblies, American National Standards Institute/Underwriters Laboratories, 2001.
- C. ASTM A1008 - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, American Society of Testing and Materials; 2004a.
- D. NFPA 101 – Life Safety Code, National Fire Protection Association, 2003.
- E. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies, National Fire Protection Association, 2003.
- F. SDI 111 A - Recommended Steel Door Frame Details, Steel Door Institute; 2002.
- G. SDI 112 - Zinc-Coated (Galvanized/Galvannealed) Standard Steel Doors and Frames, Steel Door Institute, 1997.
- H. UL 1784 – Air Leakage Tests for Door Assemblies without an artificial bottom seal, Underwriters Laboratories Inc., 2001 (For Smoke Containment, Enclosed Elevator Lobbies, Fire Service Access Elevator Lobby Doors, Hoistway Opening Protection).

1.05 SYSTEM DESCRIPTION

- A. Performance Requirements
 - 1. Certified to BHMA – A156.32, Integrated Door Opening Assemblies, 2015.

1.06 SUBMITTALS

- A. Shop Drawings
 - 1. In accordance with Section 01 33 00.
 - 2. Indicate each door and frame condition; frame type, profile and installation detail; items of finish hardware, finishes and electrical roughin requirements.
- B. Samples
 - 1. In accordance with Section 01 33 00.
- C. Environmental
 - 1. Submit UL certification for Environmental Product Declaration (EPD).
- D. Performance
 - 1. Submit certification for ANSI/BHMA 156.32
- E. Fire Certificate of Compliance

Single Application Part 1: General (cont.)**1.07 QUALITY ASSURANCE**

- A. Qualifications
 - 1. Manufacturer: Firm with not less than 5 years successful experience in fabrication of integrated metal door opening assemblies with full-height latch/lock and full-height hinge.
 - 2. Supplier: Authorized distributor of manufacturer.
 - 3. Installer: Factory trained.
- B. Regulatory Requirements
 - 1. Rated door assemblies shall have been tested to meet conditions of NFPA 252 as required by NFPA 101 section 6-2.3.3.

1.08 DELIVERY, STORAGE AND HANDLING

- A. Packaging: Polyvinyl wrapped, palette by floor, and clearly marked for each opening.
- B. Delivery: Deliver to site in original unopened containers and pallets bearing system manufacturers name, and brand.
- C. Store: Horizontally on level surface, not less than 2 inches off floor in a clean, dry well-ventilated area protected from sunlight, extreme heat, dryness and moisture.
- D. Receiving, off-loading, and site distribution should be handled by an authorized Total Door Distributor unless otherwise stipulated by contract. If the G.C. or other entity handles all or any portion of the receiving, off-loading, and site distribution, they are held responsible for any and all damages that may result from potential miss handling of the product.

1.09. PROJECT CONDITIONS

- A. Do not bring door systems to site until building temperature and humidity ranges are compatible with recommended values for preservation of wood moisture content as listed by AWI AWQS. Building shall be stabilized at 30 to 60 percent humidity.

1.10 WARRANTY

- A. Integrated metal door opening assembly: Manufacturer's standard 5 year warranty against defects in material and workmanship. Refer to Manufacturer's published warranty.
- B. Store doors in a clear, dry ventilated space having controlled temperature and a relative humidity

Single Application: Part 2: Products**2.01 MANUFACTURERS**

- A. Integrated metal door systems
 - 1. Total Door: www.totaldoor.com.
 - 2. Substitutions: Refer to Section 01 25 13, Not permitted.
- B. Hardware
 - 1. Total Door: www.totaldoor.com.
 - 2. Substitutions: Refer to Section 01 25 13, Not permitted.

2.02 MATERIALS

- A. Frames
 - 1. To be supplied by others.
 - 2. In accordance with ANSI/SDI A250.8, SDI 111A, and SDI 112.
 - 3. Construction: KD or Allwelded units.
 - 4. Material: Steel, cold rolled, ASTM A1008, 16 gauge.
 - 5. Fire Resistance Rating: Where indicated in Contract Documents for doors.
 - 6. Spreader Bar: Removable, at sill (For all welded type).
- B. Frame Anchorage Devices
 - 1. To securely fasten to wall construction without distortion or stress.
 - 2. In accordance with fire resistance rating indicated in Contract Documents.
- C. Integrated Door Assembly
 - 1. Integrated Door Assembly
 - a. Stiles: Steel, galvanized, 16 gauge, spot welded.
 - b. Top and Bottom Rails: 5-1/2 inch 18 gauge steel rails.
 - c. Cores:
 - 1. Solid polystyrene continuously bonded to faces.
 - 2. Temperature Rise.
 - d. Thickness: 1-3/4 inches.
 - e. Faces: Steel, stretcher leveled, without seams or spot welds, galvanized 20 gauge.
 - f. Weld pattern: In accordance with manufacturer's standard details.
 - 2. Gasketing
 - a. Door System: Factory applied to locking channel
 - b. Frame: Factory supplied, field apply to head of frame.
 - c. Floor: Factory supplied Surface Smoke Seal to be field applied. (must be ordered with elevator shaft & lobby applications)

2.03 FINISHES

- A. Hinge and Locking Channel
 - 1. Finish: Factory Pre-Finished.
 - a. **Color to be selected by Architect.**
- B. Door Faces, Interior
 - 1. Finish: **To be selected by Architect, refer to door schedule.**

Single Application: Part 3: Execution**3.01 EXAMINATION**

- A. Field Conditions
 - 1. Prior to commencing installation, examine parts of building structure, which are to receive door systems and component parts.
 - 2. Report, in writing, conditions which would prevent proper execution or endanger permanency of the work to the Architect.
- B. Field Dimensions
 - 1. Where possible, verify frame tolerances before fabrication of door systems.
 - 2. Notify Architect of variances with reviewed shop drawings.
- C. Corrective measures, when necessary, shall be determined and approved prior to commencing fabrication.
- D. Coordinate door opening assembly details with adjacent work to assure proper attachments, clean junctions, etc.

3.02 INSTALLATION

- A. Install work in accordance with Contract Documents and reviewed shop drawings.
 - 1. Install door systems and hardware in accordance with manufacturer's recommendations.
 - 2. Installer: Factory trained.
 - 3. Deliver frames to be installed by others.
- B. Integrated Door Assembly
 - 1. Hang to maintain manufacturer's installation tolerances.
 - 2. Adjust to freely swing without binding, sticking, or sagging, and to eliminate excessive clearances.
- C. Hardware: When installation is otherwise complete, adjust hardware for proper operation and function.

Section 081713 - Integrated Metal Door Opening Assemblies**5.18****Single Application: Part 4: System Schedule****Set 90° Hold Open**

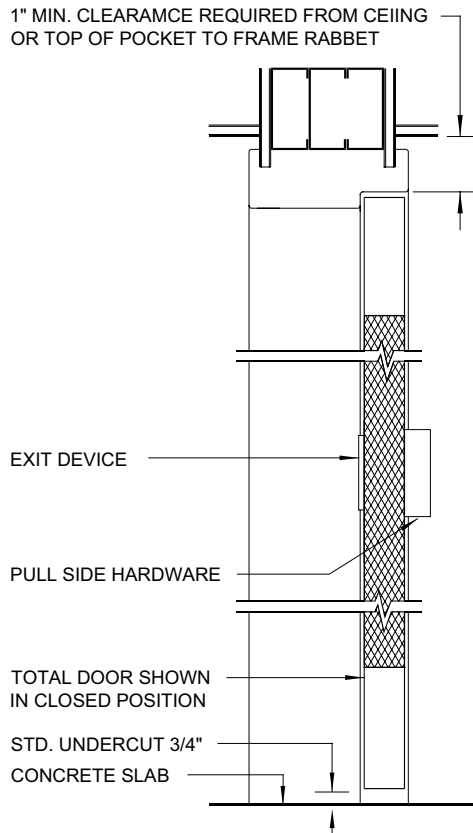
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1 ea	Full Height Latch Channel	L-11	Color TBD	Total Door
1 ea	Operating Pulls	M32	628	Total Door
1 ea	Exit Device/insert to match skin	PF200 (Flush Panic)	628	Total Door
1 ea	Closer	TDC96P-2	Alum	Total Door
1 ea	Mag Holder	TDH100		Total Door
1 ea	Positive Pressure label (confirm rating with door schedule)			Total Door
	(Stairwells may require a temperature rise rating)			
	(Elevator lobby doors will require a smoke seal (W60) certified to UL1784 w/out an artificial bottom seal)			

Set 180° Single Hold Open

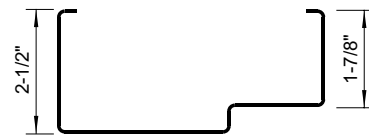
1 ea	Full Height Hinges	H-13	Color TBD	Total Door
1 ea	Full Height Latch Channel	L-11	Color TBD	Total Door
1 ea	Operating Pulls	M32	628	Total Door
1 ea	Exit Device/insert to match skin	PF200 (Flush Panic)	628	Total Door
1 ea	Closer	TDC8907	Alum	Total Door
1 ea	Mag Holder	TDH100		Total Door
1 ea	Positive Pressure label (confirm rating with door schedule)			Total Door
	(Stairwells may require a temperature rise rating)			
	(Elevator lobby doors will require a smoke seal (W60) certified to UL1784 w/out an artificial bottom seal)			

Section 081713 - Integrated Metal Door Opening Assemblies

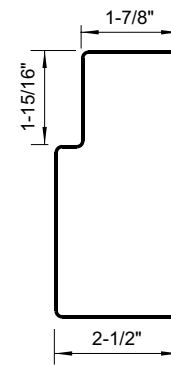
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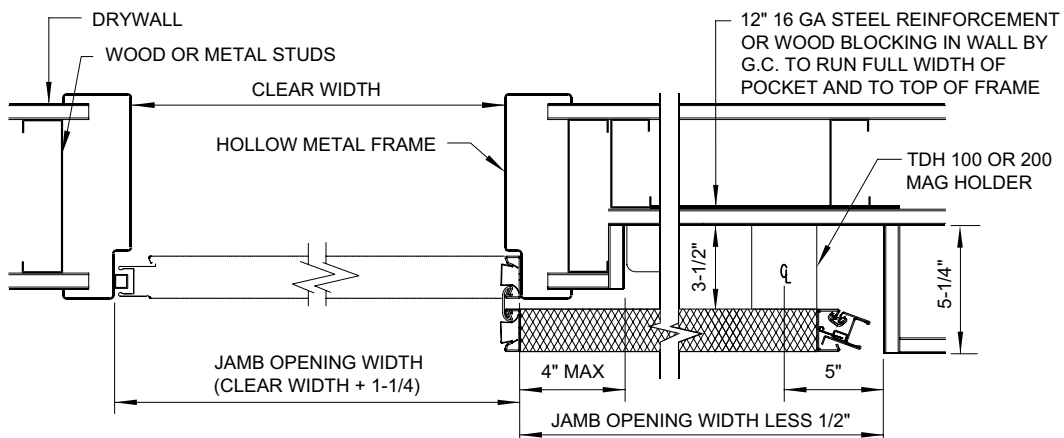


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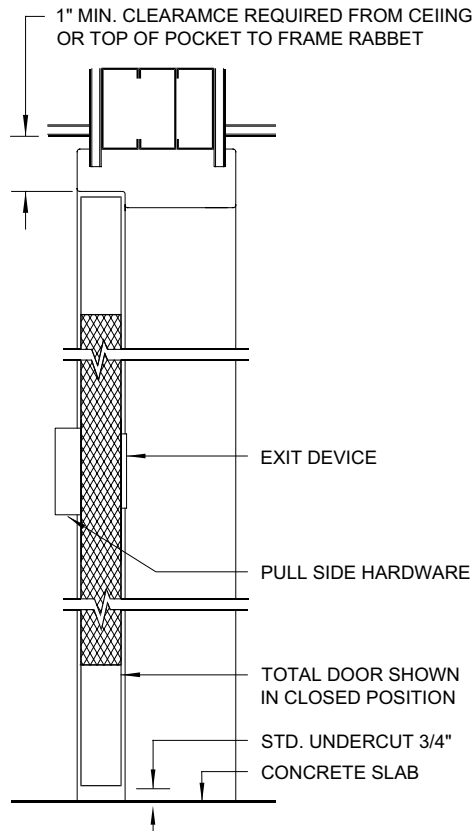
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NOTE: FRAME BY OTHERS



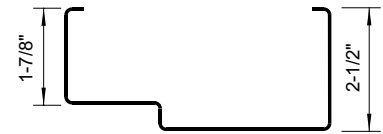
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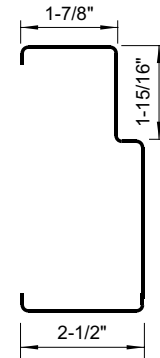


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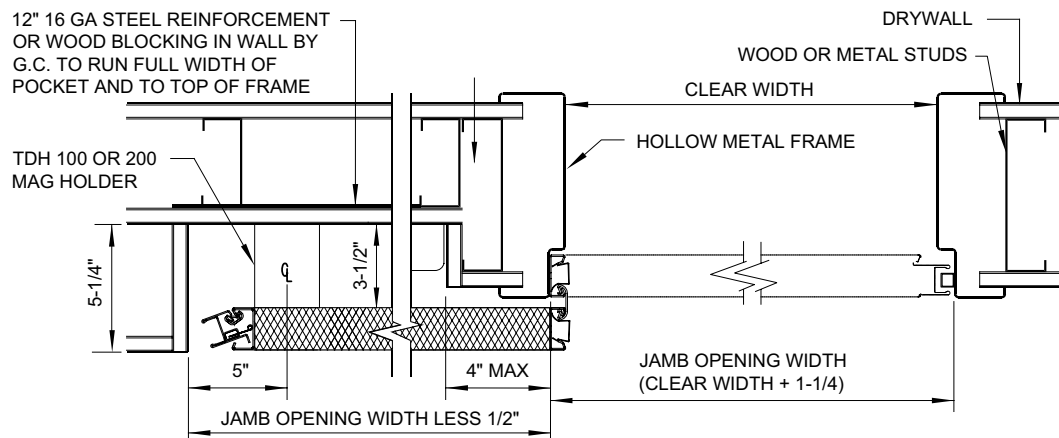


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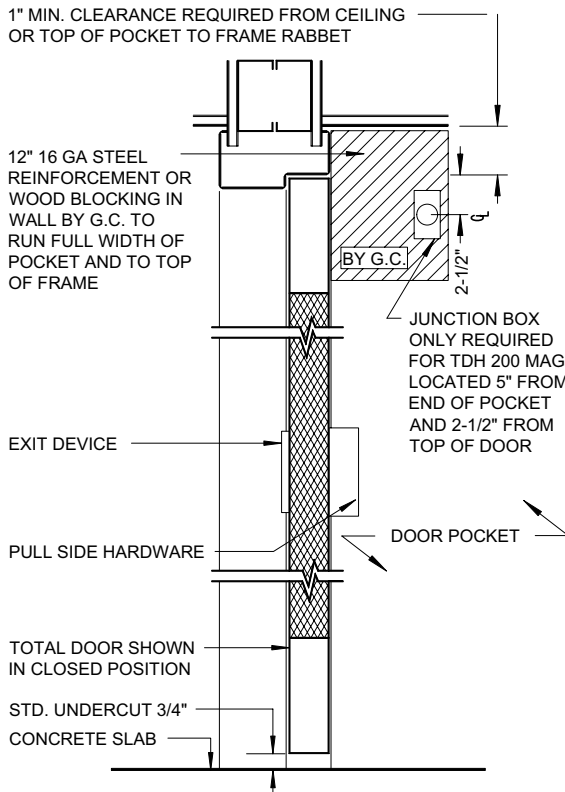


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Section 081713 - Integrated Metal Door Opening Assemblies

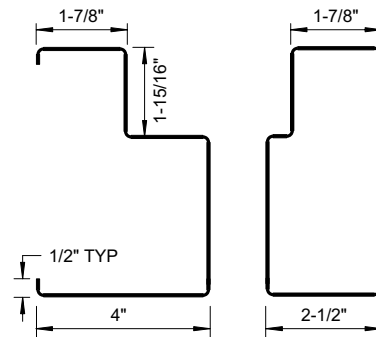
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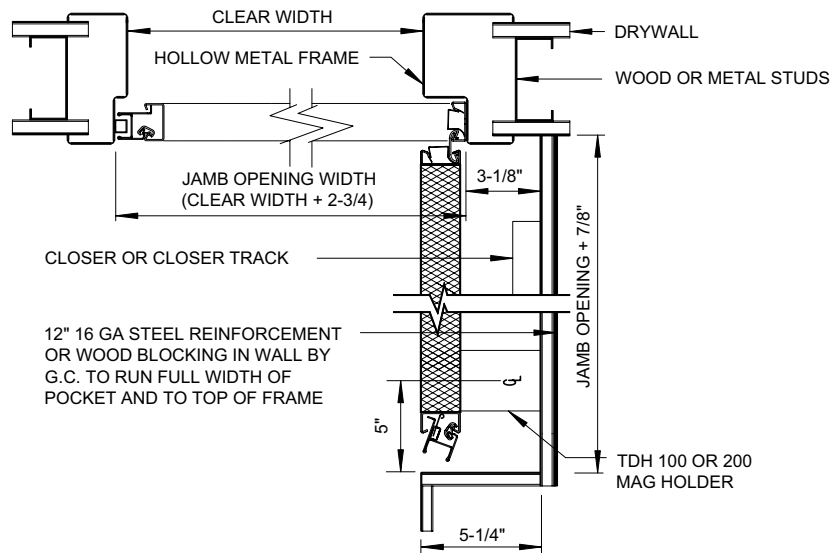


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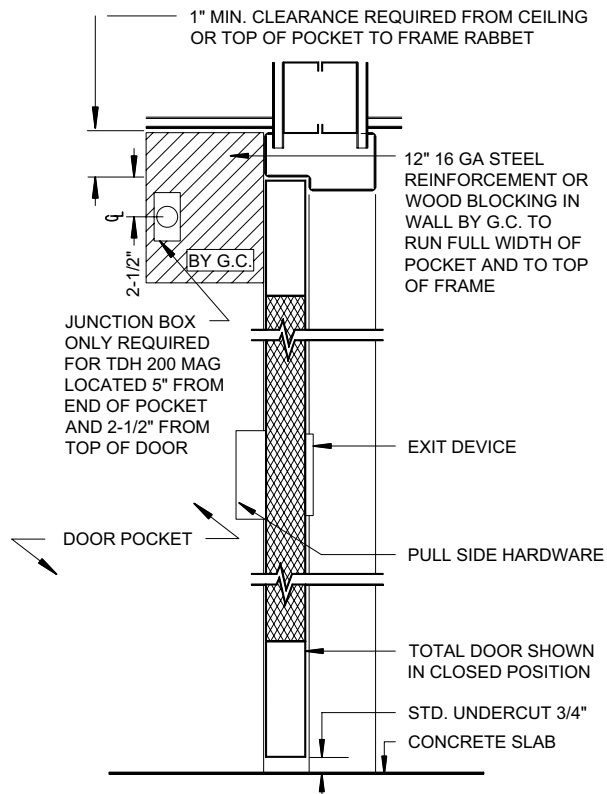
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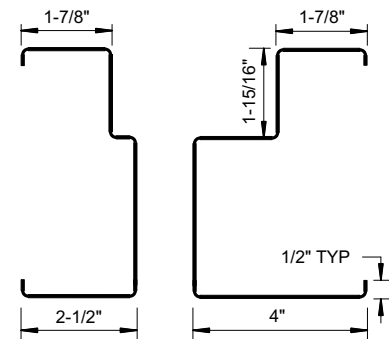
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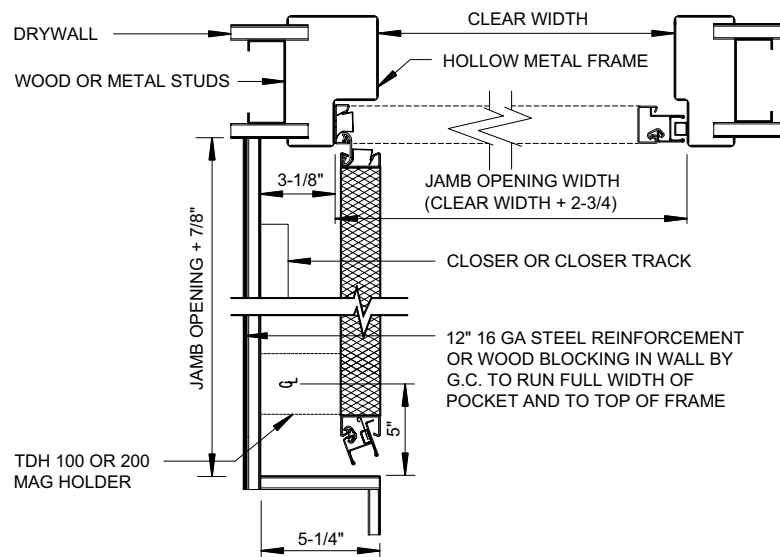


HEAD PROFILE



JAMB PROFILE

NOTE: FRAME BY OTHERS



2 HORIZONTAL SECTION
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