

ALUMINUM

CONTINUOUS GEARED HINGES

Mini Product Catalog

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Standard Finishes

Aluminum Continuous Geared Hinges – Cross Reference Chart

				ABH PRODUCTS																			
S – Standard C – Custom	ANSI #	Color Name		Door Pulls & Custom Pulls	Rescue Hardware	Electrical Power Transfers	Locking Ladder Pulls	Custom Strikes	Electromagnetic Door Holders	Surface Bolts, Slide Bolts, Vertical Rod Protectors & Covers	Roller Latches	Coordinators	Flush Bolts	Wall Stops, Floor Stops, Applied Stops, Pipe Stops	Overhead Holders & Stops	Hospital Push/Pulls	Custom Slim Line Pivots	Cam Lift Hinges & Specialty Hinges	Pivots & Pivot Sets	Stainless Steel Door Edge Guards	Stainless Steel Pin & Barrel Continuous Hinges	Aluminum Geared Hinges	
				S	US3	605/632	BRIGHT BRASS	•	•		•	•	•	•				•	•	•	•	•	•
S	US4	606/633	SATIN BRASS	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
C	US5	609/638	BRASS SATIN OXIDIZED	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
S	US9	611	BRIGHT BRONZE – CLEAR COATED	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
S	US10	612/639	SATIN BRONZE	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
C	US10A	641	ANTIQUE BRONZE LACQUERED	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
S	US10B	613/640	BRONZE OILED	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
C	US14	618	BRIGHT NICKEL (US32)	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
C	US14B	-	BRIGHT BLACK NICKEL	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
C	US15	619/646	SATIN NICKEL	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
C	US15A	620/647	SATIN NICKEL ANTIQUE OXIDIZED	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
C	US17A	621	SATIN BLACK NICKEL CLEAR COAT	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
S	US26	625/651	BRIGHT CHROME (US32)	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
C	US26D	626/652	SATIN CHROME (US32D)	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
S	US32D	630	SATIN STAINLESS STEEL	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
S	US32	-	BRIGHT STAINLESS	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
S	USP	600	PRIME COAT	•	•		•	•	•	•				•	•	•	•	•	•	•	•		
S	S1	-	PAINTED ALUMINUM	•	•	•	•	•	•	•				•	•	•	•	•	•	•	•		
S	S2	695	PAINTED BRASS	•	•	•	•	•	•	•				•	•	•	•	•	•	•	•		
S	S3	694	PAINTED BRONZE	•	•	•	•	•	•	•				•	•	•	•	•	•	•	•		
S	S4/BSP	693	BLACK SUEDE POWDER COATING	•	•	•	•	•	•	•				•	•	•	•	•	•	•	•		
S	S5	695	PAINTED DARK BRONZE	•	•	•	•	•	•	•				•	•	•	•	•	•	•	•		
S	S8/WSP	-	WHITE SUEDE POWDER COATING	•	•	•	•	•	•	•				•	•	•	•	•	•	•	•		
S	AM	-	CRYSTAL CLEAR – ANTI-MICROBIAL	•	•	•	•	•	•	•				•	•	•	•	•	•	•	•		
S	C	-	CLEAR ANODIZED (US28)			•																•	
C	ABH	-	CHAMPAGNE ANODIZED																			•	
C	ABH	-	LIGHT BRONZE ANODIZED																			•	
C	ABH	-	MEDIUM BRONZE ANODIZED																			•	
C	D	-	DARK BRONZE ANODIZED																			•	
S	ABH	-	STAT BRONZE ANODIZED																			•	
S	B	-	BLACK ANODIZED																			•	
C	ABH	-	GOLD ANODIZED																			•	
C	ABH	-	CUSTOM ANODIZED FINISHES																			•	

*** Custom Finishes Available – Contact Factory**

ABH® reserves the right to make changes or improvements in design, material, parts or specifications, and "discontinue" without notice.

Type	ABH	Allegion	ASSA Abloy*		Stanley*	Hager*	Select*	NGP*	PBB*	Kingsway*
		Ives	Pemko*	McKinney*						
Full Concealed	A110	112	FM_SLF	MCK-12	661	780-112	SL11	HD1100	CG31	-
	A110SL	-	-	-	-	780-226	-	-	-	-
	A110 AHT SEC	-	-	-	-	-	-	-	-	KG200
	A110WT	-	WT_FM	MCK-WT	-	780-235	SL40	-	-	-
	A111	-	-	MCK-14	667	780-111	SL18*	HD1800	-	-
	A111WT	-	-	-	-	-	-	-	-	-
	A120	-	-	-	-	-	-	-	-	-
	A130	-	FM_SLISF	MCK-38	668	780-113	SL71	-	-	-
	A135	-	-	-	-	-	-	-	-	-
	A140	114	-	-	669	780-124	SL14	HD1400	-	-
	A150	-	K_FM	K-MCK-12	670	-	-	-	-	-
	A160	-	FM_SLI	-	671	-	-	-	-	-
	A170	-	-	-	-	780-112A/111B	SL12*	-	-	-
	A240	224	FM	MCK-25	662	780-224	SL24	HD2400	CG31L	-
	A260	026	-	-	672	-	SL26	-	-	-
	A270	027	-	-	673	780-226	SL27	HD2700	CG31P	-
	A280	-	-	-	-	-	-	-	-	-
A410	041	OS_FM	-	674	780-041	SL41	HD4100	-	-	
Double Acting	A507	-	Markar DSH1000	-	-	-	-	-	-	KG202
Half Surface	A211	-	OS_HS	-	675	780-211	-	HD4200	-	-
	A213	-	-	-	676	780-213	-	-	-	-
	A450	045	-	-	677	780-045	-	-	-	-
	A460	046	-	-	678	780-046	-	-	-	-
	A530	053	-	-	679	780-053	SL53	HD5300	-	-
A540	054	HS	MCK-54	663	780-054	SL54	HD5400	-	-	
A550	-	HS_SF	-	680	780-155	-	-	-	-	
Half Mortise	A520	-	HM	-	-	-	-	-	-	-
Full Surface	A210	210	FS	MCK-22	665	780-210	SL21	HD2100	CG33C	-
	A570	157	FS_CP	MCK-58	664	780-157	SL57	HD5700	CG33N	-
	A571	-	FS_BP	-	681	780-057	SL60	-	-	-
	A571 AHT SEC	-	-	-	-	-	-	-	-	KG210
	A575	-	-	-	-	-	-	-	-	-
Electrical Options	A-EA12	TW	WIRE/ACC	-	CE	ETW	CTW (AP*)	-	-	-
	EA12-QC	TW CON	QC	QC	-	QC	ATW	-	-	-
	R	-	-	-	-	RETW	RP	-	-	-
	R & EA12-EZ	TWP	SER (EZ)	SER (EZ)	-	-	-	-	-	-
	PT	EPT	PT	EPT	EPT	EPT	EPT	-	-	-
	EM	-	CM	MM	CS	EMN	ECMG	-	-	-
	ES	-	-	-	-	EIS	EMS	-	-	-
Non – Electrical Options	HT	HT	HT	HT	HT	HT	HT	-	-	-
	FR	-	FIRE PINS	FIRE PINS KIT	FP	UL-STUD	FR3	-	-	-
	SC	-	-	-	SC	BAT*	SO	-	-	-
	DD	-	-	DD	DD	DD	DD	-	-	-

General Information

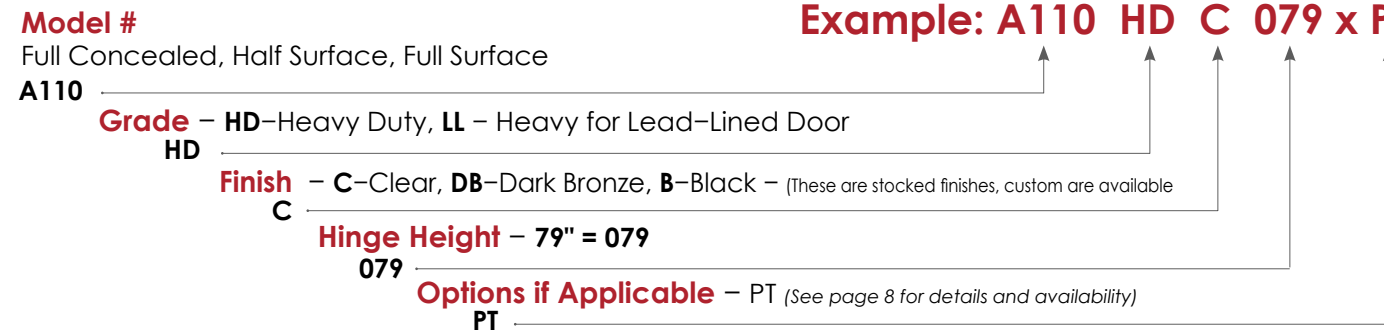
General Information

Standard Features

- Continuous hinges alleviate most common alignment problems such as door binding and sagging by evenly distributing the weight throughout the entire door and frame.
- Provides extra security by eliminating the gap between the door and the frame; thus, disallowing the ability to pry the opening.
- All hinges are surface applied – no mortising of the door or frame required
- First Choice hinges are anodized after machining
- Will cover old butt hinge cut-outs
- All hinges are heavy duty at standard duty prices
- Heavy duty 83" hinge has 32 bearings (3" spacing on center)
- BHMA 156.25 Grade 1 Certified
- Templated hole patterns for standard length hinges keep consistency over time.
- Standard Finishes – Clear anodized, dark bronze anodized and black anodized
- Door reinforcement: None required
- Frame reinforcement: None required for doors up to 200 lbs. For doors more than 200 lbs., 16 gauge channel required

How to Order

Example: **A110 HD C 079 x PT**



Warranty

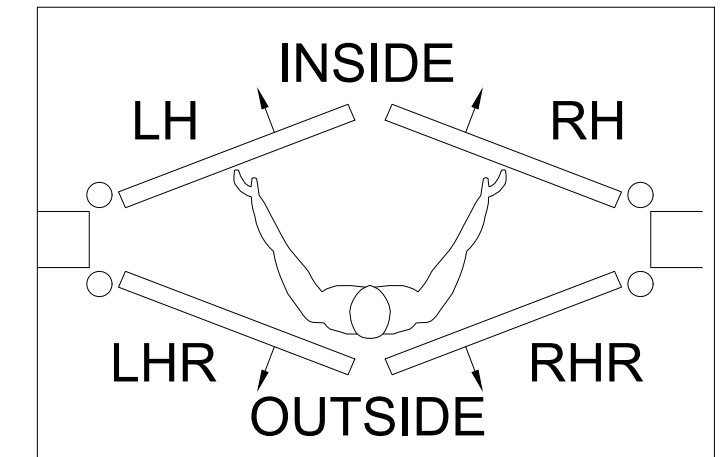
ABH provides a limited lifetime warranty on its hinges for the lifetime of the door opening.

All electrified modifications have a five year limited warranty.

Fire Rating

All ABH Aluminum Geared Hinge Models (except A130) Have been tested and certified by UL® (U.S.A. and Canada) for up to and including a 3-Hour Fire Listing on all 4'0" x 10'0" doors.

- For use on metal swinging type fire doors rated up to and including 90 minutes (Specify "FR" option for 3 hours)
- For use on wood swinging type fire doors rated up to and including 60 minutes (Specify "FR" option for 90 minutes)

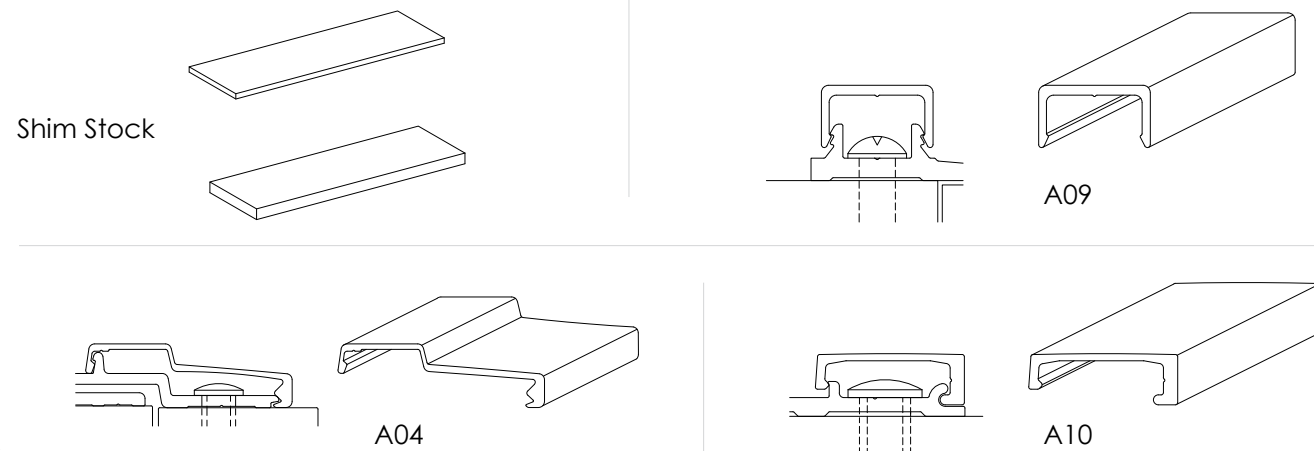


Parts

Fasteners

Parts	
R -EA12 -4	4" Removable Section Only - (12) 22 AWG Ribbon Wires with Easy Access Panel (Specify Hinge Model & Finish)
R -QC12EZ -4	4" Removable Section Only - (12) 22 AWG Ribbon Wires With Easy Access Panel - Molex® Microfit 3.0 Connectors (Specify Hinge Model & Finish)
GHSIM -83 -063	Shim - 1/16" thick x 1 -1/2" wide x 83" long, aluminum, clear anodized
GHSIM -83 -125	Shim - 1/8" thick x 1 -1/2" wide 83" long, aluminum, mill finish
GHSIM -120 -063	Shim - 1/16" thick x 1 -1/2" wide x 120" long, aluminum, clear anodized
GHSIM -120 -125	Shim - 1/8" thick x 1 -1/2" wide x 120" long, aluminum, mill finish

Parts - Aluminum Geared Hinges	Normal Door Height	Net Hinge Height
A04 - Door Leaf Cover for A210, A211, A213, A450 & A460	6'8"	79"
A09 - Frame Leaf Cover for A520, A570	7'0"	83"
A10 - Door Leaf Cover for A530, A540, A550, A570 & A571	7'2"	85"
A10 - Frame Leaf Cover for A571	8'0"	95"
	10'0"	120"



Fasteners		
SCREW PACK-FM	Full Mortise Screw Pack (Specify wood or metal, finish, hinge model and hinge length)	
SCREW PACK-HS	Half Surface Screw Pack (Specify wood or metal, finish, hinge model and hinge length)	
SCREW PACK-FS	Full Surface Screw Pack (Specify wood or metal, finish, hinge model and hinge length)	
SCREW PACK-SEC-FM	Full Mortise Screw Pack with Pin-in torx security fasteners. (Specify wood or metal, finish, hinge model and hinge length)	
SCREW PACK-SEC-HS	Half Surface Screw Pack with Pin-in torx security fasteners. (Specify wood or metal, finish, hinge model and hinge length)	
SCREW PACK-SEC-FS	Full Surface Screw Pack with Pin-in torx security fasteners. (Specify wood or metal, finish, hinge model and hinge length)	
GH1224FHSDS-500-C	(500) 12 -24 x 3/4" Phillips flat head, undercut self -drilling, thread-forming tek machine screws, for clear hinges	
GH1224FHSDS-500-D	(500) 12-24 x 3/4" Phillips flat head, undercut, self -drilling, thread-forming tek machine screws, for dark bronze or black hinges	
GH12FHWS-500-C	(500) #12 x 1-1/2" Phillips flat head, undercut wood screws, for clear hinges	
GH12FHWS-500-D	(500) #12 x 1-1/2" Phillips flat head, undercut wood screws, for dark bronze or black hinges	
GH12FHWS-500-C-SEC	(500) #12 x 1-1/2" Pin-in torx flat head, undercut wood security screws, for clear hinges	
GH12FHWS-500-D-SEC	(500) #12 x 1-1/2" Pin -in torx flat head, undercut wood security screws, for dark bronze or black hinges	
GH1224FHSDS-500-C-SEC	(500) 12-24 x 3/4" Pin-in torx flat head, undercut self-drilling, thread-forming tek machine security screws, for clear hinges	
GH1224FHSDS-500-D-SEC	(500) 12 -24 x 3/4" Pin-in torx flat head, undercut self -drilling, thread-forming tek machine security screws, for dark bronze or black hinges	
GH1224RHSDS-500	(500) 12 -24 x 3/4" Phillips round head self-drilling, thread -forming tek machine screws, zinc plated	

Electrical Options

Electrical Options - Compatibility Chart

PT – Cut –out Prep for Power Transfer (For Aluminum or Stainless Steel Hinges)

Hinge is prepped for electrical power transfer unit - must specify power transfer unit being used and location of cu-out desired. See ABH Electrical Power Transfer section in the catalog for available models. (sold separately)

EA – 12 Easy Access

Transfers power from the frame to the door in a discreet manner

- (12) 22 AWG Super Flex Ribbon Wire

EA12 – EZ Easy Access Thru –Wire with QC Connect

- Wires are supplied with Moles® Plug –in Connectors for installation ease
- (12) 22 AWG Super Flex Ribbon Wire with EZ connectors

EM – Concealed Electrical Magnetic Monitoring Switch (For Aluminum Hinges)

Magnetic monitoring switch is installed in the frame leaf to monitor the door position with three 12" wire leads. Specify handing.

ES – Exposed Electrical Monitoring Switch (For Aluminum Hinges)

Push button switch is installed in the frame leaf to monitor the door position. Specify handing.

R – Removable Electrical Access Prep

Hinge is supplied in three separate sections so the electrical section can be removed without having to remove the entire hinge.

TW2 – Thru – Wire Section

- 5" Section
- Hinge supplied in three separate sections so the electrical section can be remove without having to remove the entire hinge
- (2) 22 AWG Wire
- For A570 Full Surface Hinge Only

Electrical Options – Compatibility Chart								
Hinge Model	PT	EA	QC	EM	ES	MT	R	TW2
FULL CONCEALED	A110	■	■	■	■	■	■	■
	A110WT	■	■	■	■	■	■	■
	A111	■	■	■	■	■	■	■
	A111WT	■	■	■	■	■	■	■
	A130							
	A140	■	■	■	■	■	■	■
	A150	■	■	■	■	■	■	■
	A160	■	■	■	■	■	■	■
	A240	■	■	■	■	■	■	■
	A260	■	■	■	■	■	■	■
	A270	■	■	■	■	■	■	■
	A410	■		■	■	■		■
HALF SURFACE	A211	■						
	A213	■						
	A450	■						
	A460	■						
	A530	■						
	A540	■						
	A550	■						
HALF SURFACE	A210							
	A570		■					■
	A571							

Non –Electrical Options

Non –Electrical Options Compatibility Chart

- CUT – Cut to Custom Length**
If a non –standard length hinge is required, ABH will cut from the bottom of the hinge to the desired length, as long as it does not interfere with a bearing and/or screw hole. Specify length and handing.

- SPLICE – Spliced Hinge**
For hinges exceeding 120", ABH splices two separate lengths with an alternately split cap to cover the gears. Specify length and handing.

- AHT – Advanced Hospital Tip**
45° Angled Top of Hinge Cap. Installed as part of hing providing a clean look and help support a safer environment in hospitals and other institutions. Specify handing.

- HT – Hospital Tip**
Top of the hinge cap is cut at a 45° angle to help support a safer environment in hospitals and other institutions. Specify handing.

- TR – Tamper Resistant**
Hinge is supplied with a hospital tip in addition to providing every other bearing with a set screw to further secure the hinge cap in high security applications.

- SEC– Security Fasteners**
Security fasteners are supplied in lieu of standard fasteners for all exposed areas.

- FR – Fire Studs**
Four stainless steel studs are supplied to provide the following fire rating:
• For use on metal swinging type fire doors rated up to and including 3 hours.

- LL – Lead-Lined**
Lead is provided for the door portion for half surface and full surface hinges where mounting holes will pierce the lead.

- SC – School Cap**
Bearing is installed with a set screw at the top of the hinge covering the hinge gears and preventing any debris or obstructions from being inserted at the top.

- DD – Dutch Door** [Dutch Door Order Form](#)
Modified door leaf cut to fit a Dutch Door application. Click above for order form or specify top and bottom door leaf heights, clearance required between door leaves and handing when ordering.

- SL – Sheared Leaf**
Sheared leaf to accommodate a 1-³/₈" thick door for concealed leaves.

- SNB for 1 –³/₈"**
Shortened bolts to accommodate a 1-³/₈" thick door for surface mounted door leaves.

- Custom Hole**
Contact factory with custom mounting hole locations desired for unusual frame/door conditions.

- No Hole**
Custom factory for hinges without mounting holes.

- Custom Finish**
Custom anodizing and powder coated finish available – contact factory for details. Custom color sample approval will be required prior to fabrication.

- Wedge**
Adjustable Safety Wedge

NON –Electrical Options – Compatibility Chart													
Hinge Model	CUT	SPLICE	HT	TR	SEC	FR	LL	SC	DD	SL	SNB FOR 1- ³ / ₈ "	CUSTOM FINISHES	AHT
FULL CONCEALED	A110	■	■	■	■	■		■	■	■		■	■
	A110WT	■	■	■	■	■		■	■	■		■	■
	A111	■	■	■	■	■		■	■	■		■	■
	A111WT	■	■	■	■	■		■	■	■		■	■
	A130	■	■	■	■	■		■	■	■		■	
	A140	■	■	■	■	■		■	■	■		■	
	A150	■	■	■	■	■		■	■	■		■	■
	A160	■	■	■	■	■		■	■	■		■	■
	A240	■	■	■	■	■		■	■	■		■	■
	A260	■	■	■	■	■		■	■	■		■	
	A270	■	■	■	■	■		■	■	■		■	■
A410	■	■	■	■	■		■	■	■		■		
HALF SURFACE	A211	■	■	■	■	■	■	■	■	■	■	■	
	A213	■	■	■	■	■	■	■	■	■	■	■	
	A450	■	■	■	■	■	■	■	■	■	■	■	
	A460	■	■	■	■	■	■	■	■	■	■	■	
	A530	■	■	■	■	■	■	■	■	■	■	■	
	A540	■	■	■	■	■	■	■	■	■	■	■	■
	A550	■	■	■	■	■	■	■	■	■	■	■	
HALF SURFACE	A210	■	■	■	■	■	■	■	■		■	■	■
	A570	■	■	■	■	■	■	■	■		■	■	■
	A571	■	■	■	■	■	■	■	■		■	■	■

Door Clearance Chart – Square Edge

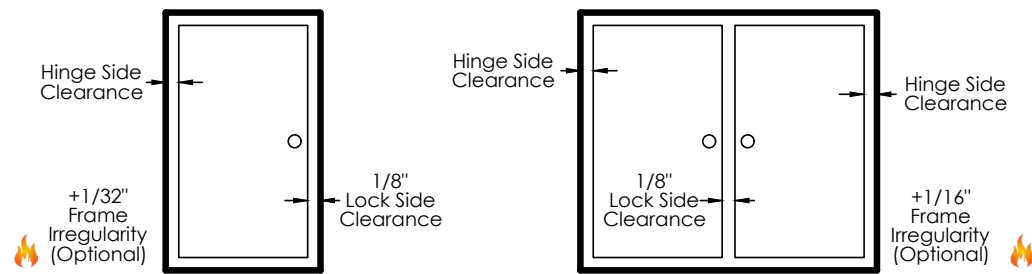
Door Clearance Chart – Beveled Edge

Single Door – Squared Edged						
Hinge Model		Hinge Thickness	+	Lock Side Clearance	+ *Frame Irregularity (OPTIONAL)	= Square Edged Door Undersized (Single)
Full Concealed	A110, A110WT, A111 A111WT, A120, A140, A150, A160, A240, A260, A270, A410	5/16"	+	1/8"	+ 1/32"	= 15/32"
	A130, A135	13/16"	+	1/8"	+ 1/32"	= 31/32"
Half Surface	A211, A213, A450, A460, A520, A530, A540, A550	3/16"	+	1/8"	+ 1/32"	= 11/32"
Full Surface	A210, A570, A571, A575	1/16"	+	1/8"	+ 1/32"	= 7/32"

Single Door – Beveled Edged							
Hinge Model		Hinge Thickness	+	Lock Side Clearance	+ *Frame Irregularity (OPTIONAL)	+ Beveled Door Clearance	= Beveled Edged Door Undersized (Single)
Full Concealed	A110, A110WT, A111 A111WT, A120, A140, A150, A160, A240, A260, A270, A410	5/16"	+	1/8"	+ 1/32"	+ 1/32"	= 1/2"
	A130, A135	13/16"	+	1/8"	+ 1/32"	+ 1/32"	= 1"
Half Surface	A211, A213, A450, A460, A520, A530, A540, A550	3/16"	+	1/8"	+ 1/32"	+ 1/32"	= 3/8"
Full Surface	A210, A570, A571, A575	1/16"	+	1/8"	+ 1/32"	+ N/A	= 7/32"

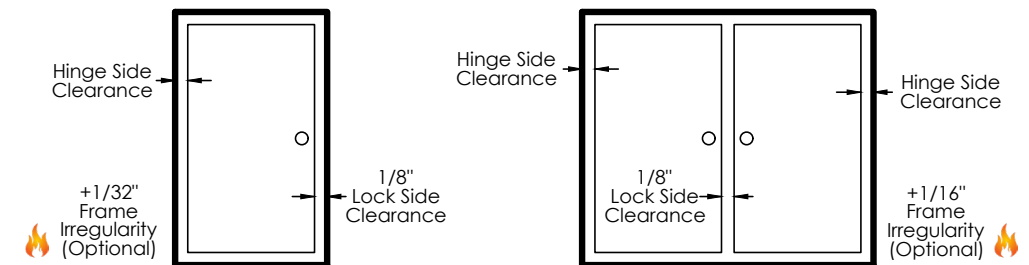
Single Door

Pair of Doors



Single Door

Pair of Doors



Pair of Doors – Squared Edged						
Hinge Model		Hinge Thickness (Pair)	+	Lock Side Clearance	+ *Frame Irregularity (OPTIONAL)	= Square Edged Door Undersized (Pair)
Full Concealed	A110, A110WT, A111 A111WT, A120, A140, A150, A160, A240, A260, A270, A410	5/8"	+	1/8"	+ 1/16"	= 13/16"
	A130, A135	1 – 5/8"	+	1/8"	+ 1/16"	= 1 – 13/16"
Half Surface	A211, A213, A450, A460, A520, A530, A540, A550	1/4"	+	1/8"	+ 1/16"	= 7/16"
Full Surface	A210, A570, A571, A575	1/8"	+	1/8"	+ 1/16"	= 5/16"

Pair of Doors – Beveled Edged							
Hinge Model		Hinge Thickness (Pair)	+	Lock Side Clearance	+ *Frame Irregularity (OPTIONAL)	+ Beveled Door Clearance	= Beveled Edged Door Undersized (Pair)
Full Concealed	A110, A110WT, A111 A111WT, A120, A140, A150, A160, A240, A260, A270, A410	5/8"	+	1/8"	+ 1/16"	+ 1/16"	= 7/8"
	A130, A135	1 – 5/8"	+	1/8"	+ 1/16"	+ 1/16"	= 1 – 7/8"
Half Surface	A211, A213, A450, A460, A520, A530, A540, A550	1/4"	+	1/8"	+ 1/16"	+ N/A	= 7/16"
Full Surface	A210, A570, A571, A575	1/8"	+	1/8"	+ 1/16"	+ N/A	= 5/16"

* 1/16" Frame Irregularity Allowance, Optional and included in all Total Door Undersize for single and pairs of doors

* 1/16" Frame Irregularity Allowance, Optional and included in all Total Door Undersize for single and pairs of doors

Frame irregularity not permitted by NFPA80

Frame irregularity not permitted by NFPA80

Hinge Types

Full Mortise Hinges

■ Full Mortise

Both hinge leaves are concealed between the rabbet of the frame and the door. Both door and frame leaves are provided with 12-24 x 3/4" self-drilling, thread forming tek screws

■ Half Surface

Frame leaf is concealed between the rabbet of the frame and the door; and, the door leaf is mounted to the face of the door.

Door leaf is provided with:

- 1/4" -20 sex bolts and shoulder bolts
- 12-24 x 1" Phillips pan head self-drilling tek screws (locator holes)
- Center punches for installation ease

Frame leaf is provided with:

- 12-24 x 3/4" Phillips self-drilling, thread forming, tek screws

■ Full Surface

Frame leaf is mounted to the face of the frame and the door leaf is mounted to the face of the door.

Door leaf is provided with:

- 12-24 x 1" Phillips flat head, undercut, self drilling, thread forming tek screws
- Center punches for installation ease

Frame leaf is provided with:

- 12-24 x 3/4" Phillips self-drilling, thread forming, tek screws
FC210, FC575 Only)

■ Half Mortise

Door Leaf is concealed between the rabbet of the frame and the frame leaf is mounted to the face of the frame.

Door leaf is provided with:

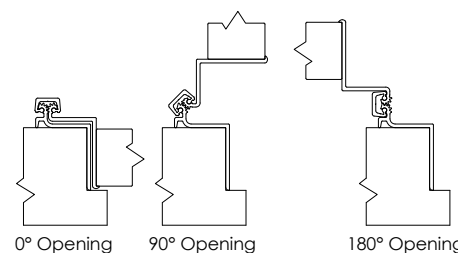
- 1/4" -20 sex bolts and shoulder bolts
- 12-24 x 3/4" Phillips flat head self-drilling tek screws (locator holes)
- Center punches for installation ease

Frame leaf is provided with:

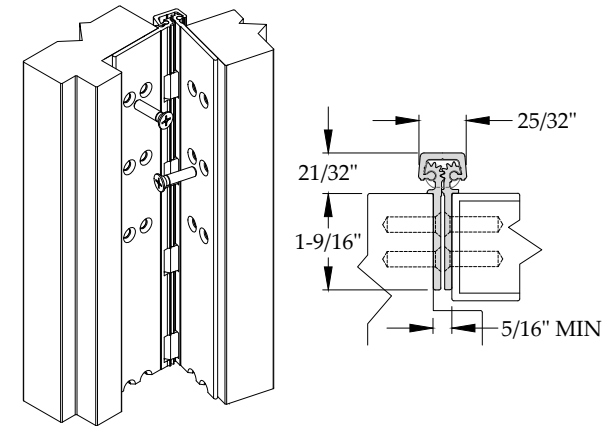
- 12-24 x 1" Phillips self-drilling, thread forming, tek screws

■ Swing Clear Hinge

A swing clear hinge allows the door to swing completely clear of the door opening. Typically used in medical centers, it allows the full door width for large items such as gurneys and wheelchairs to pass. ABH offers the A410 swing clear and A211 swing clear models (see page 21 and 23 for details).



■ A110HD/A110LL



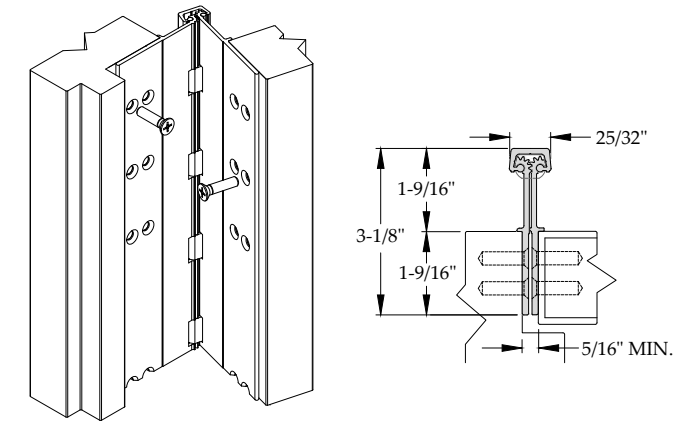
■ Standard Features

- Full Surface, Heavy Duty
- No door inset, flush mount
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7-10 for option availability and details.

■ A110WTHD



■ Standard Features

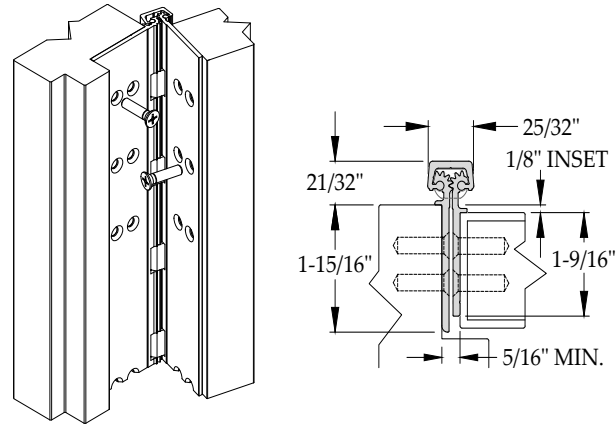
- Full Surface, Heavy Duty
- No door inset, flush mount
- Wide throw for applications that need extra clearance for the door or the frame
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7-10 for option availability and details.

Full Mortise Hinges

■ A111HD/A111LL



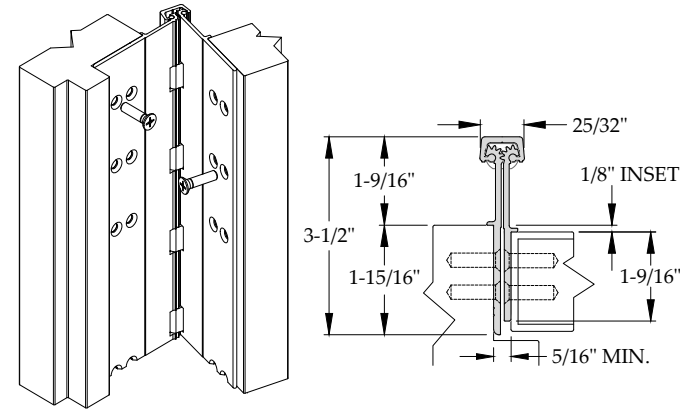
■ Standard Features

- Full Concealed, Heavy Duty
- 1/8" door inset
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7 -10 for option availability and details.

■ A111WTHD



■ Standard Features

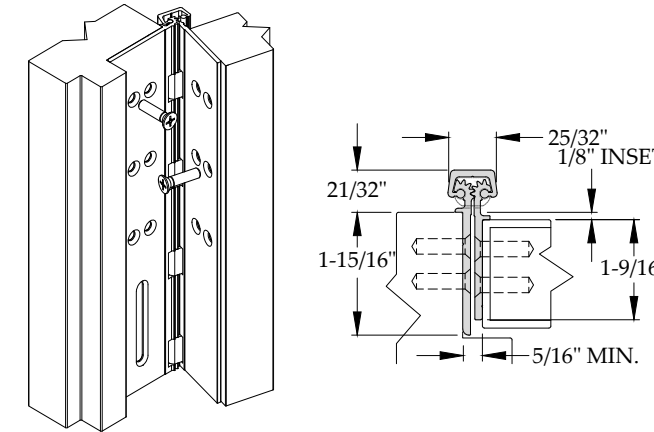
- Full Concealed, Heavy Duty
- 1/8" door inset
- Wide throw for applications that need extra clearance for the door or the frame
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7 -10 for option availability and details.

Full Mortise Hinges

■ A120HD



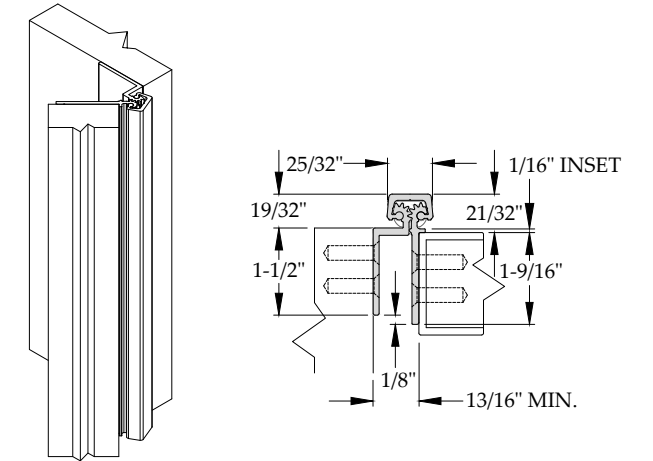
■ Standard Features

- Full Concealed, Heavy Duty
- 1/8" door inset
- 48" door width maximum
- **450 lbs. door weight maximum**
- Allows for vertical adjustability after the hinge is secured to the door and frame, reducing overall installation time and cost.
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 83-3/8", 95-3/8", 120-3/8"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7 -10 for option availability and details.

■ A130HD



■ Standard Features

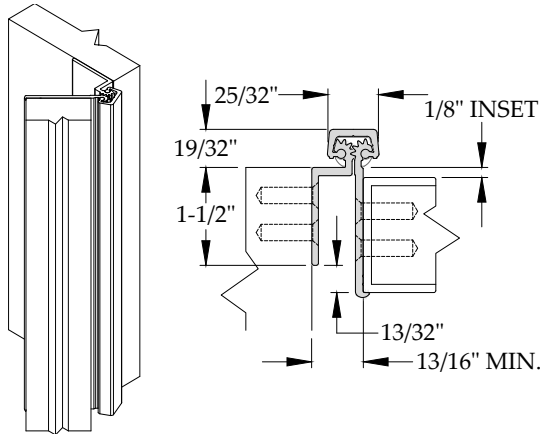
- Full Concealed, Heavy Duty
- 1/16" door inset
- Safety hinge application when used without a frame stop
- Used primarily in schools, nursing homes and day care facilities to avoid fingers and or other objects being closed in the door.
- 3/16" gap between from leaf and door leaf when door is closed.
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)

■ Options Available

- See pages 7 -10 for option availability and details.

Full Mortise Hinges

■ A135HD



■ Standard Features

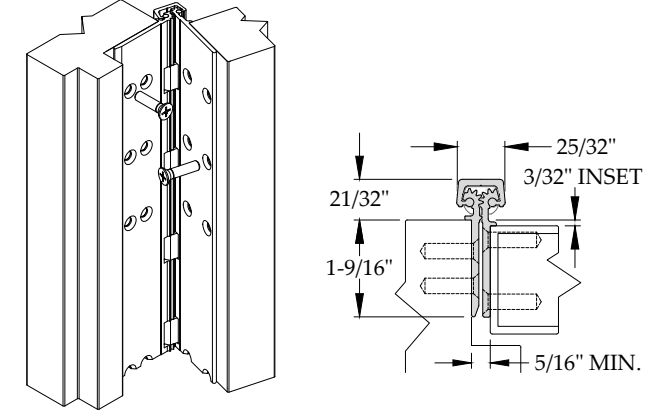
- Full Concealed, Heavy Duty
- 1/8" door inset
- 48" door width maximum
- **450 lbs. door weight maximum**
- Door edge protector lip
- Safety hinge application when used without a frame stop
- Used primarily in schools, nursing homes and care facilities to avoid fingers and other objects being closed in the door.
- 3/16" gap between from leaf and door leaf when door is closed
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)

■ Options Available

- See pages 7 -10 for option availability and details.

Full Mortise Hinges

■ A160HD/A160LL



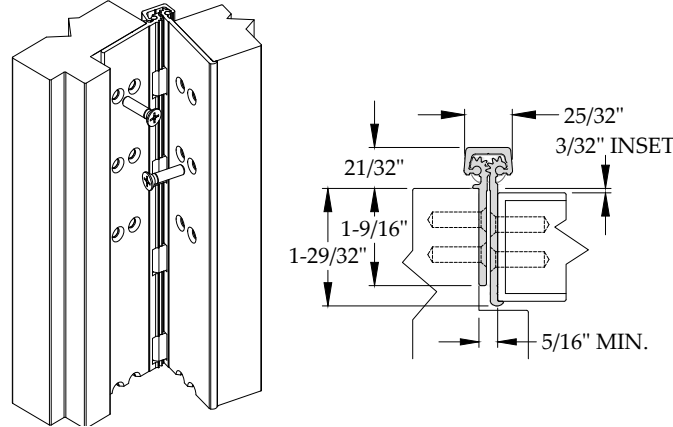
■ Standard Features

- Full Surface, Heavy Duty
- 3/32" door inset
- Beveled edge on frame leaf
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7 -10 for option availability and details.

■ A140HD/A140LL



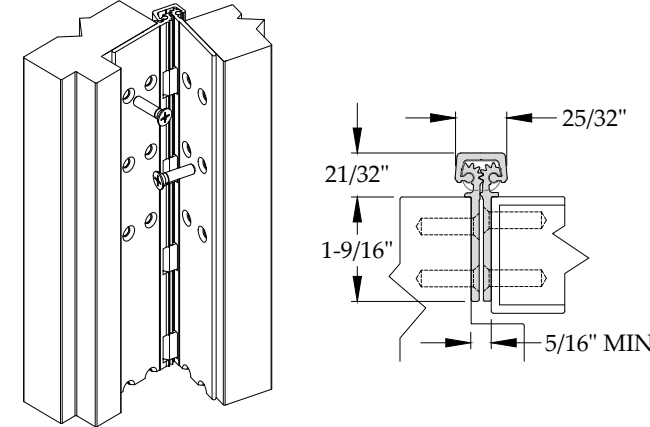
■ Standard Features

- Full Concealed, Heavy Duty
- 3/32" door inset
- Door edge protector lip
- For use on 1-3/4" thick door
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7 -10 for option availability and details.

■ A150HD/A150LL



■ Standard Features

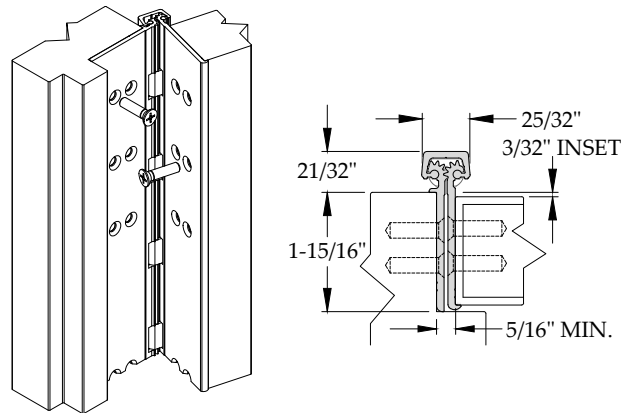
- Full Concealed, Heavy Duty
- No door inset, flush mount
- Design for use on the Kawneer "Tuffline"® aluminum doors
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7 -10 for option availability and details.

Full Mortise Hinges

■ **A240HD/A240LL**



■ **Standard Features**

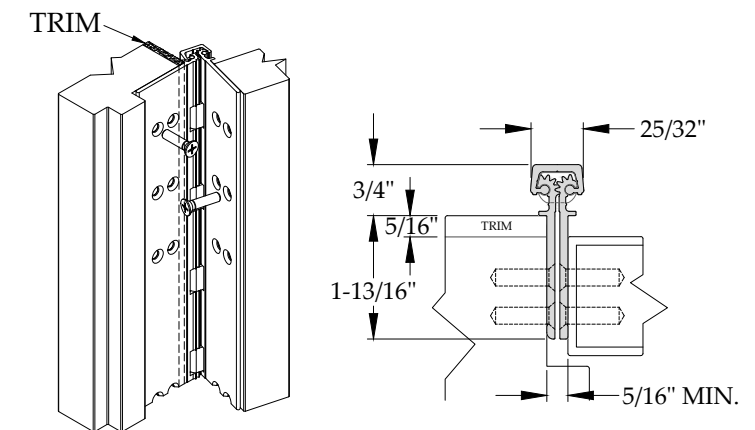
- Full Concealed, Heavy Duty
- $\frac{3}{32}$ " door inset
- Door edge protector lip
- For use on 1- $\frac{3}{4}$ " thick door
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x $\frac{3}{4}$ " undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ **Options Available**

- See pages 7-10 for option availability and details.

Full Mortise Hinges

■ **A280HD/A280LL**



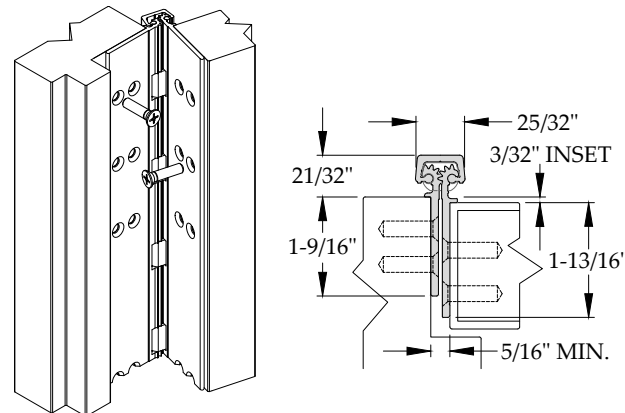
■ **Standard Features**

- Full Concealed, Heavy Duty
- No inset
- Used on frames with snap-on trim, No reveal
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x $\frac{3}{4}$ " undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ **Options Available**

- See pages 7-10 for option availability and details.

■ **A260HD/A260LL**



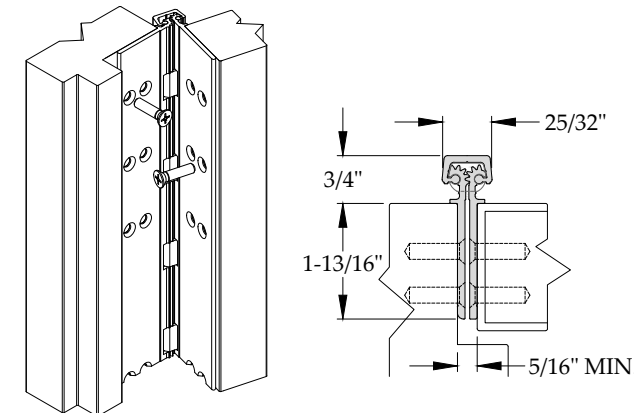
■ **Standard Features**

- Full Concealed, Heavy Duty
- $\frac{3}{32}$ " door inset
- For use on 2" thick door
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x $\frac{3}{4}$ " undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ **Options Available**

- See pages 7-10 for option availability and details.

■ **A270HD/A270LL**



■ **Standard Features**

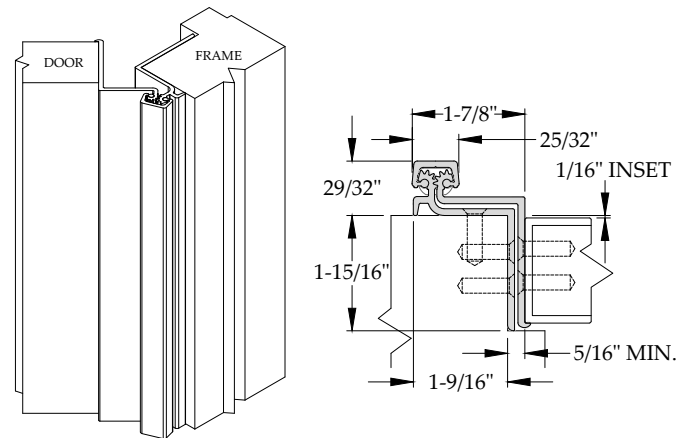
- Full Concealed, Heavy Duty
- No door inset, flush mount
- For use on 2" thick door
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x $\frac{3}{4}$ " undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ **Options Available**

- See pages 7-10 for option availability and details.

Full Mortise Hinges

■ **A410HD/A410LL**



■ **Standard Features**

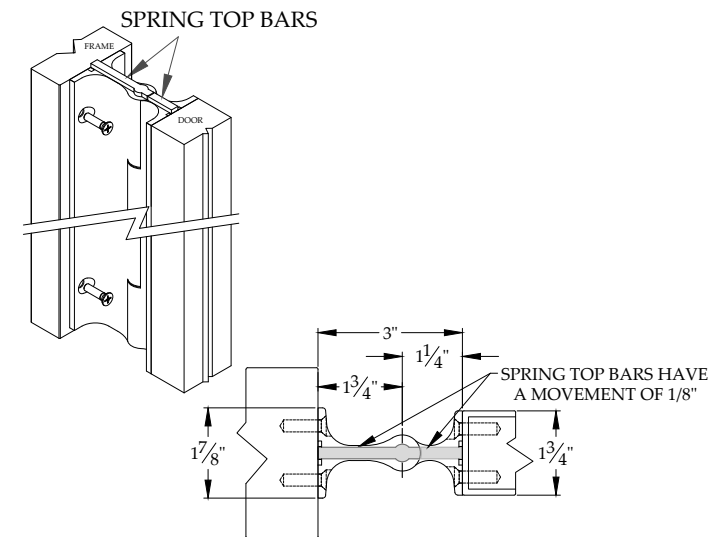
- Full Concealed, Heavy Duty
- No inset, flush mount
- Swing clear application
- Door protection lip
- 48" door width maximum
- **450 lbs. door weight maximum**
- "LL" model for doors up to 1,000 lbs. (lead-lined staggered hole pattern)
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ **Options Available**

- See pages 7-10 for option availability and details.

Double Acting Hinge

■ **A507**



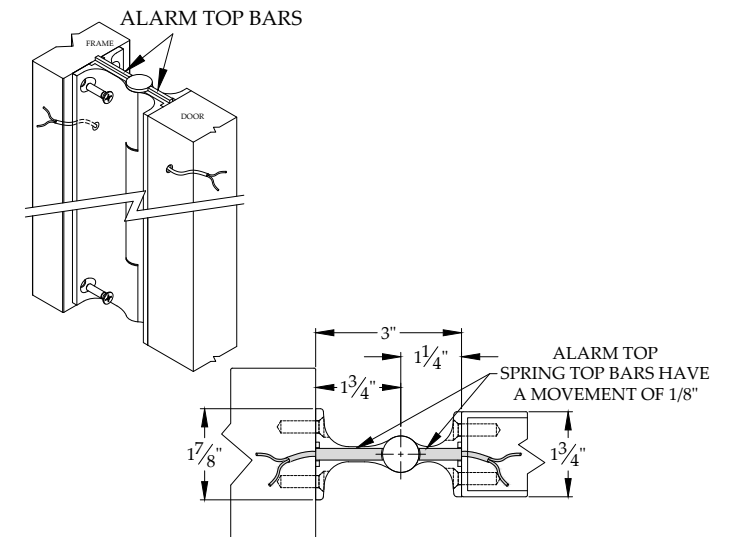
■ **Standard Features**

- Full Concealed, Heavy Duty
- Double acting
- No alarm
- Spring top
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 3/4" pin-in torx undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 83", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)

■ **Options Available**

- See pages 7-10 for option availability and details.

■ **A507-AT**



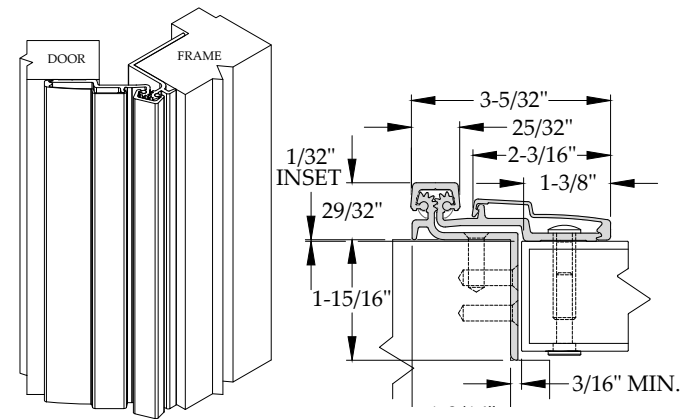
■ **Standard Features**

- Full Concealed, Heavy Duty
- Double acting
- Alarm top
- Spring top
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 3/4" pin-in torx undercut self-drilling, thread-forming tek machine screws
- **Standard lengths:** 83", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)

■ **Options Available**

- See pages 7-10 for option availability and details.

■ **A211HD**



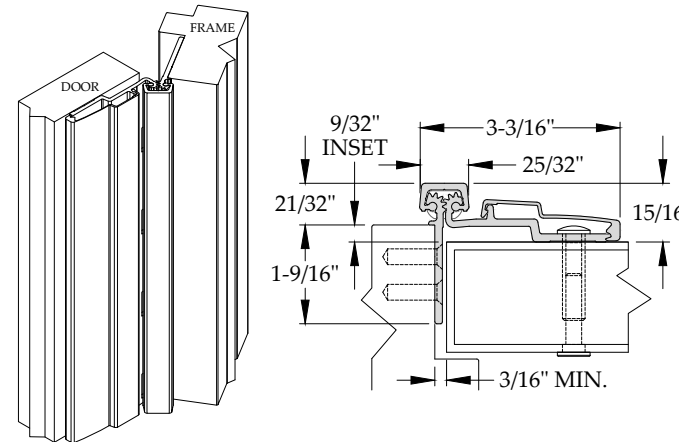
■ **Standard Features**

- Half Surface, Heavy Duty
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12–24 x 7/8" undercut self-drilling, thread-forming tek machine screws for frame and 1/4" – 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ **Options Available**

- See pages 7–10 for option availability and details.

■ **A450HD**



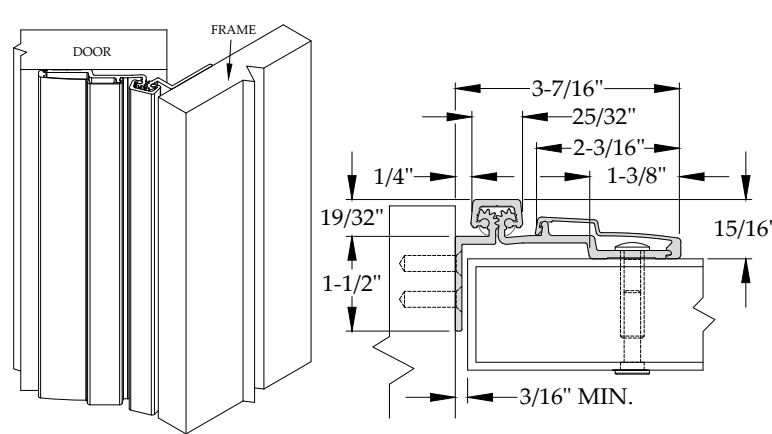
■ **Standard Features**

- Half Surface, Heavy Duty
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12–24 x 3/4" undercut self-drilling, thread-forming tek machine screws for frame and 1/4" – 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ **Options Available**

- See pages 7–10 for option availability and details.

■ **A213HD**



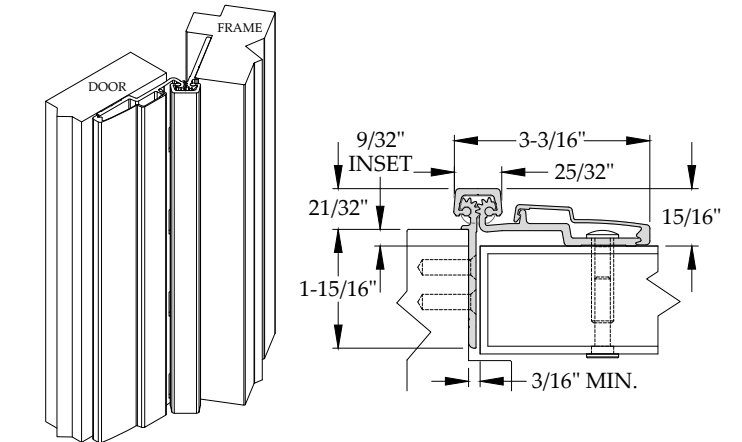
■ **Standard Features**

- Half Surface, Heavy Duty
- Center hung door application where finger guards require a long reach
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12–24 x 3/4" undercut self-drilling, thread-forming tek machine screws for frame and 1/4" – 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ **Options Available**

- See pages 7–10 for option availability and details.

■ **A460**



■ **Standard Features**

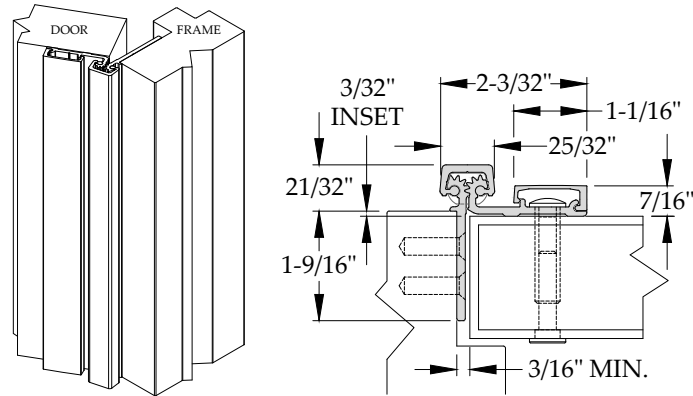
- Half Surface, Heavy Duty
- 9/32" door inset
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12–24 x 3/4" undercut self-drilling, thread-forming tek machine screws for frame and 1/4" – 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ **Options Available**

- See pages 7–10 for option availability and details.

Half Surface Hinges

■ A530HD



■ Standard Features

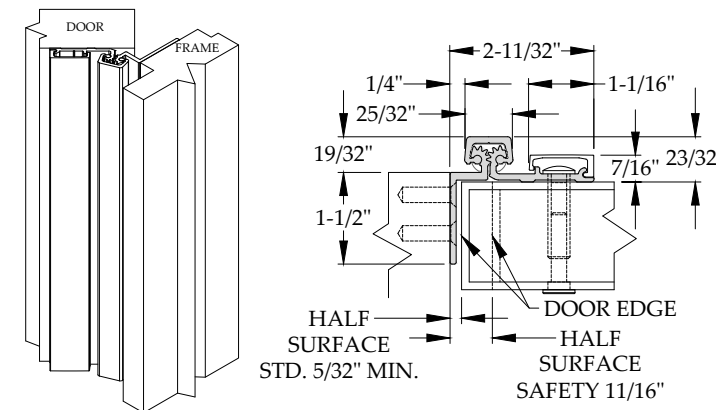
- Half Surface, Heavy Duty
- $\frac{3}{32}$ " door inset
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x $\frac{3}{4}$ " undercut self-drilling, thread-forming tek machine screws for frame and $\frac{1}{4}$ " - 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7-10 for option availability and details.

Half Surface Hinges

■ A550HD



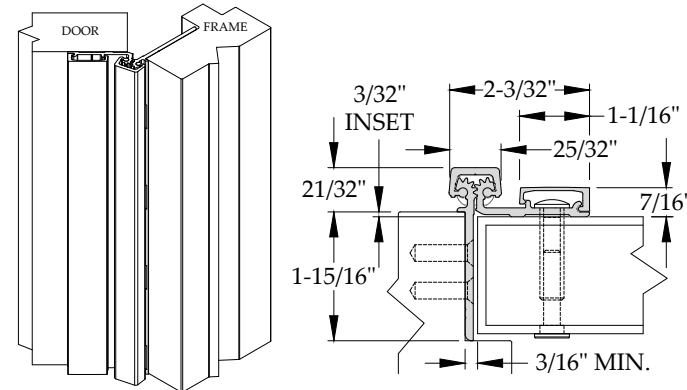
■ Standard Features

- Half Surface, Heavy Duty
- For double egress and center hung conversions
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x $\frac{3}{4}$ " undercut self-drilling, thread-forming tek machine screws for frame and $\frac{1}{4}$ " - 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7-10 for option availability and details.

■ A540HD



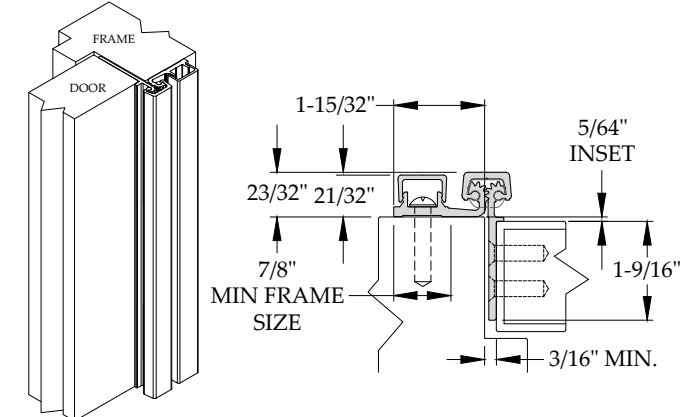
■ Standard Features

- Half Surface, Heavy Duty
- $\frac{3}{32}$ " door inset
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x $\frac{3}{4}$ " undercut self-drilling, thread-forming tek machine screws for frame and $\frac{1}{4}$ " - 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7-10 for option availability and details.

■ A520HD



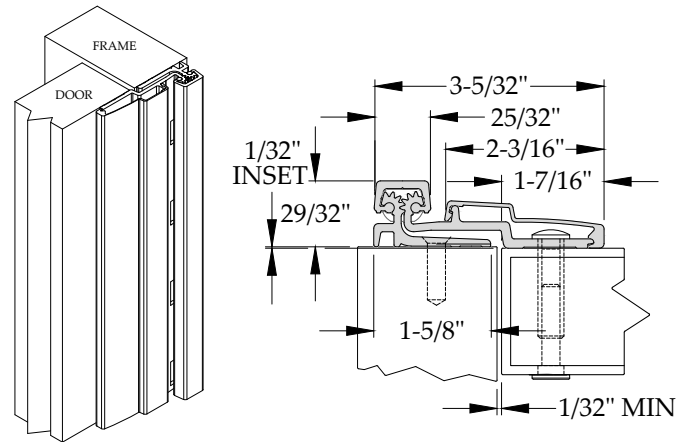
■ Standard Features

- Half Mortise, Heavy Duty
- For double egress and center hung conversions
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 1" undercut self-drilling, thread-forming tek machine screws for frame and $\frac{1}{4}$ " - 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

■ Options Available

- See pages 7-10 for option availability and details.

A210HD



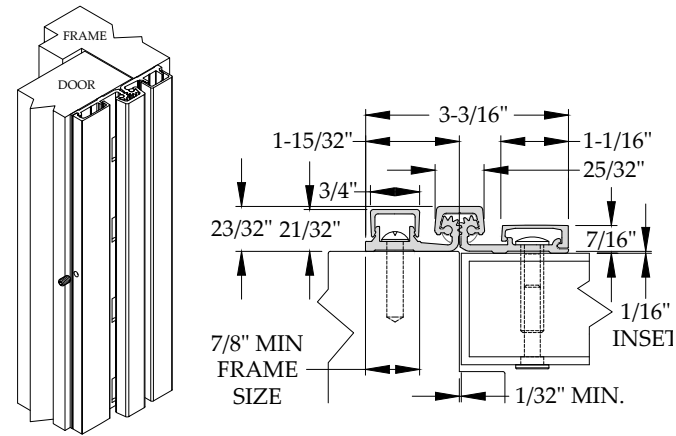
Standard Features

- Full Surface, Heavy Duty
- No door inset, flush mount
- Swing clear application
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws for frame and 1/4" - 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

Options Available

- See pages 7-10 for option availability and details.

A570HD



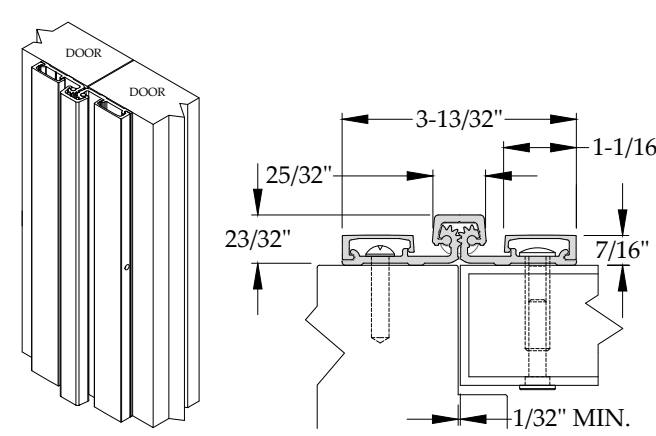
Standard Features

- Full Surface, Heavy Duty
- 1/16" door inset
- For narrow-faced frames
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 1" Phillips, pan head, undercut self-drilling, thread-forming tek machine screws for frame and 1/4" - 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

Options Available

- See pages 7-10 for option availability and details.

A571HD



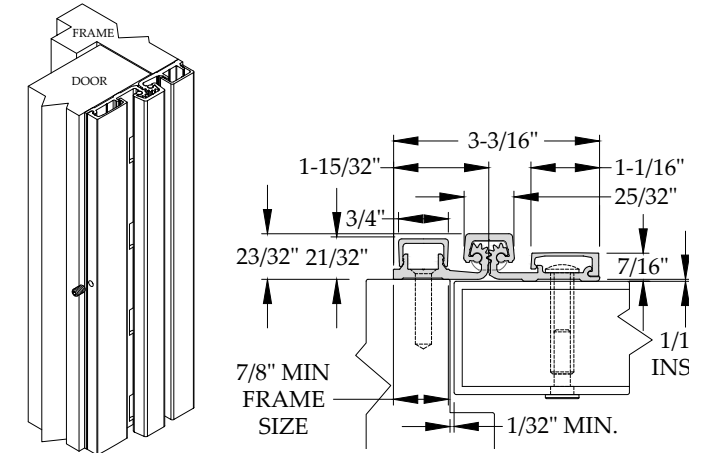
Standard Features

- Full Surface, Heavy Duty
- To be used for Bi-fold applications
- No inset door, flush mount
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws for frame and 1/4" - 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

Options Available

- See pages 7-10 for option availability and details.

A575HD



Standard Features

- Full Surface, Heavy Duty
- 1/16" door inset
- For narrow-faced frames
- 48" door width maximum
- **450 lbs. door weight maximum**
- **Fasteners:** 12-24 x 3/4" undercut self-drilling, thread-forming tek machine screws for frame and 1/4" - 20 sex bolts and shoulder bolts for door
- **Standard lengths:** 79", 83", 85", 95" and 120"
- **Finishes:** Clear, dark bronze and black anodized (call factory for custom finishes)
- **Fire Rating**
 - Approved for use on metal swinging type minutes (Specify "FR" option for 3 hour rating)

Options Available

- See pages 7-10 for option availability and details.

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