



**LIFETIME
WARRANTY**

Standard Lengths

Cal-Royal continuous hinge length provides for actual threshold clearance, head clearance and door height allowances for carpeting. Other lengths may be ordered as non-standard items. Our standard actual lengths are 83" (7'0" opening), 95" (7'2" to 8'0" opening).

Special Lengths

Special lengths are considered non-standard items and may not be grouped with standard items or other Cal-Royal Products, to achieve a lower discount. Any Changes to the special length products may be subject to charges for work in process. Templates available on request and on website.

Field Modifications

Cal-Royal continuous hinges can be cut in the field, however, any product modifications may void all warranties. If field modifications must be made, cut only the underside or bottom of the hinge.

Standard Finishes

Cal-Royal continuous hinges are available in either Clear Anodized Aluminum (US28) or Dark Bronze Anodized (Duranodic 313 or equivalent). Special finishes are available subject to quantity & factory lead time

Fire Ratings - Underwriters Laboratory Fire Rating			
FIRE RATED CAL-ROYAL	FULL CONCEALED	HALF SURFACE	FULL SURFACE
SURFACE	FULL	U/L---FF	U/L---FF
SURFACE	U/L---FF	U/L---FF	U/L---FF
90 Minute Fire Rated Wood Door x Fire Rated Hollow Metal Frame	* U/L---Stud	U/L---Stud	U/L---Stud
90 Minute Fire Rated Metal Door x Fire Rated Hollow Metal Frame	U/L---FF	U/L---FF	U/L---FF
3 Hour Fire Rated Hollow Metal Door x Fire Rated Hollow Metal Frame	*U/L---Stud	U/L---Stud	U/L---Stud
Maximum Size of Single Rated Door Leaf 4'0" Wide x 10'0" High			
Maximum Rated Opening Size for Single Door 4'0" Wide x 10'0" High			

* Devices for which Studs are required

Cal-Royal continuous hinges are approved for use on swing type doors of hollow metal, tinclad, sheet-metal and steel covered composite type rated up to and including 3 hours. Wood composite doors rated up to and including 1½ hours.

Fully Concealed - These models are concealed between the rabbet of the frame and the hinge edge of the door.

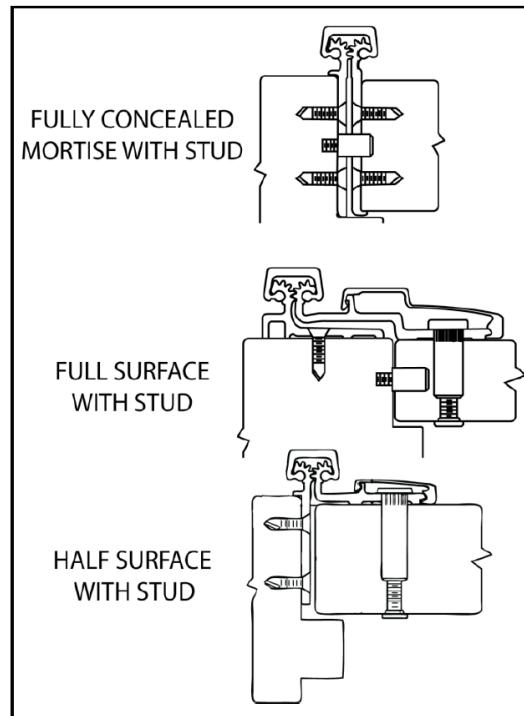
Models available: CRHD781110, CRHD781120, CRHD782240

Full Surface - These models have the frame leaf mounted to the face of the frame and the face of the door. The door leaf is mounted to the door with through bolts.

Models available: CRHD780570, CRHD781570, CRHD782100

Half Surface – These models have the frame leaf concealed between the rabbet of the frame and the edge of the door. The door leaf is mounted to the face of the door with sex bolts or screws.

Models available: CRHD780530

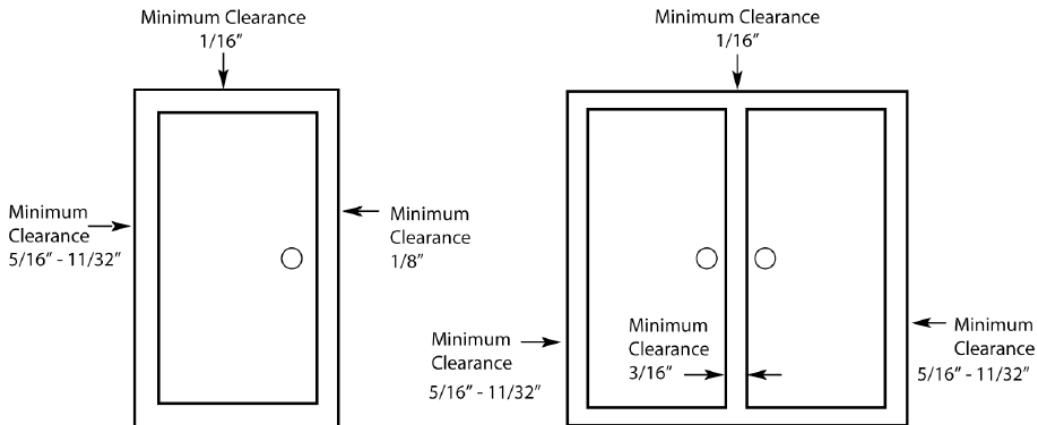


Dimensioning Door and Frame ---- Full Concealed Mortised Models
CRHD781110, CRHD781120, CRHD782240

The Above models are primarily used for new doors and frames. Both leaves are fully Mortised. They can also be used on renovations for a new door with an existing frame or an existing door with a new frame. These hinges will cover existing standard full Mortise hinge preps.

Required Clearance

Single Doors (Square Edged)		STANDARD	METRIC
A. Thickness of Hinge	5/16"	(10/32")	8.0 mm
B. Allowances for frame irregularities	1/32"	(1/32")	0.8 mm
C. Single Door Clearance on lock side	1/8"	(4/32")	3.2 mm
		Total	15/32"
Single Doors (Beveled Edged)			
A. Thickness of Hinge	5/16"	(10/32")	8.0 mm
B. Allowances for frame irregularities	1/32"	(1/32")	0.8 mm
C. Single Door Clearance on lock side	1/8"	(4/32")	3.2 mm
D. Allowance for beveled edge	1/32"	(1/32")	0.8 mm
		Total	16/32"
Pairs of Doors (Square Edged)			
A. Thickness of Hinge	5/16"	(10/32")	8.0 mm
B. Allowances for frame irregularities	1/32"	(1/32")	0.8 mm
C. Recommended Edge to Edge clearance	3/16"	(6/32")	4.8 mm
D. Second allowance for frame irregularities	1/32"	(1/32")	0.8 mm
E. Second hinge thickness	5/16"	(10/32")	8.0 mm
		Total	28/32"
Pairs of Doors (Beveled Edge)			
A. Thickness of Hinge	5/16"	(10/32")	8.0 mm
B. Beveled Edge allowance	1/32"	(1/32")	0.8 mm
C. Allowances for frame irregularities	1/32"	(1/32")	0.8 mm
D. Recommended Edge to Edge clearance	3/16"	(6/32")	4.8 mm
E. Second allowance for frame irregularities	1/32"	(1/32")	0.8 mm
F. Second allowance for beveled edge	1/32"	(1/32")	0.8 mm
G. Second hinge thickness	5/16"	(10/32")	8.0 mm
		Total	30/32"
			24.0 mm



Determining Door & Frame Dimensions - Full Surface Models
CRHD780570, CRHD781570, CRHD782100

The Above models require no special dimensioning, they are designed for retrofit applications. Full Surface models are designed to be mounted to the exposed surface of the door and frame. Additional clearance is not needed except for door and frame painting.

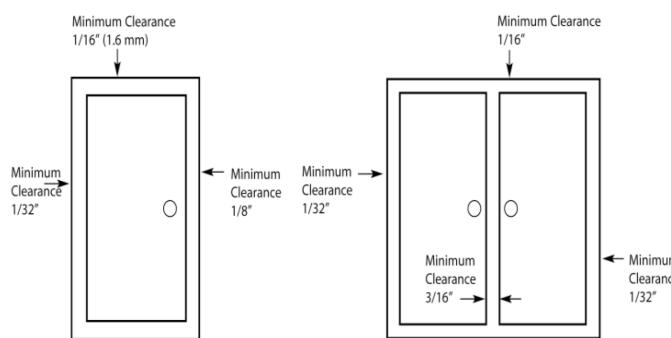
Required Clearance

Single Doors (Square & Beveled Edge)	STANDARD	METRIC
A. Thickness of Hinge	0"	(0") 0.0 mm
B. Additional allowance for door and frame painting (optional)	1/32"	(1/32") 0.8 mm
C. Clearance for Single Door Lock side	1/8"	(4/32") 3.2 mm
	TOTAL	5/32" 4.0 mm

Required Clearance

Single Doors (Square & Beveled Edge)	STANDARD	METRIC
A. Thickness of Hinge	0"	(0") 0.0 mm
B. Frame Irregularities, additional allowance	1/32"	(1/32") 0.8 mm
C. Recommended clearance, edge to edge	3/16"	(6/32") 4.8 mm
D. Frame irregularities, second allowance	1/32"	(1/32") 0.8 mm
E. Second hinge thickness	0"	(0") 0.0 mm
	TOTAL	8/32" 6.4 mm

Note: Additional clearance may be required for paint or weatherstripping



Determining Door & Frame Dimensions - Half Surface Models
CRHD780530

The Above model is designed for use in new doors and frames wherein one leaf is concealed and one leaf is surface mounted. This can also be used in retrofit applications in cases where a new door is installed on an existing frame. Half Surface models are designed for one leaf to be mounted to the exposed surface of the door and the other leaf is concealed on the frame.

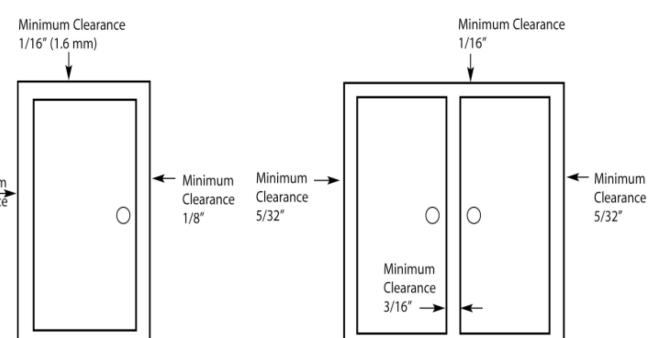
Required Clearance

Single Doors (Square & Beveled Edge)	STANDARD	METRIC
A. Thickness of Hinge	1/8"	(4/32") 3.2 mm
B. Additional allowance for door and frame painting (optional)	1/32"	(1/32") 0.8 mm
C. Clearance for Single Door Lock side	1/8"	(4/32") 3.2 mm
	TOTAL	9/32" 7.2 mm

Required Clearance

Single Doors (Square & Beveled Edge)	STANDARD	METRIC
A. Thickness of Hinge	1/8"	(4/32") 3.2 mm
B. Frame Irregularities, additional allowance	1/32"	(1/32") 0.8 mm
C. Recommended clearance, edge to edge	3/16"	(6/32") 4.8 mm
D. Frame irregularities, second allowance	1/32"	(1/32") 0.8 mm
E. Second hinge thickness	1/8"	(4/32") 3.2 mm
	TOTAL	8/32" 12.8 mm

Note: Additional clearance may be required for paint or weatherstripping



Concealed / Mortise Leaf • Any Door Material • Heavy Duty

Heavy Duty for high frequency 1 3/4" doors or heavy medium frequency doors up to 450 lbs.

CRHD781110 (Heavy Duty), CRHD781120 (Heavy Duty), CHRHD782240 (Heavy Duty)

MODEL#	LENGTH		SCREW COUNT		CLEARANCE
	IN	CM	DOOR	JAMB	
CRHD781110	83	210.8	19	19	$\frac{5}{16}$ " (8mm) hinge side plus standard lockside clearance
CRHD781110	95	241.3	19	19	
CRHD781120	83	210.8	19	19	
CRHD781120	95	241.3	19	19	
CRHD782240	83	210.8	19	19	
CRHD782240	95	241.3	19	19	

• **FASTENERS:**

Self-Tapping screws

Full Mortise Hinges

1. All fasteners are No. 12-24 x 1/16" Type C, FHUC

- Heavy Duty Hinges - 10 required for each leaf
- Wood Screw - on request (specify on order)

• **LENGTH OPTIONS:**

83" & 95"

• **DOOR REINFORCEMENT:**

None needed to 200lbs.

Use 16 gauge channel over 200 lbs.

• **FIRE RATING:**

Up to 3 Hours

• **SPECIAL FEATURES:**

For new construction

For renovation with new doors and/or frames

No mortising of doors or frames required

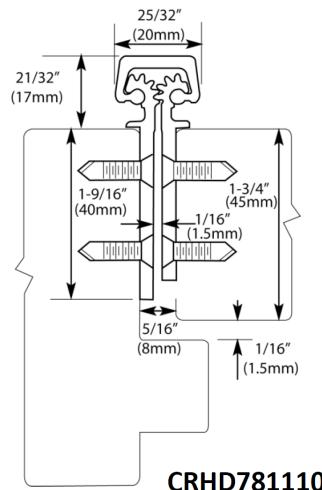
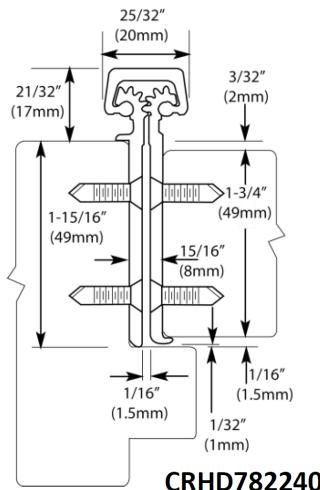
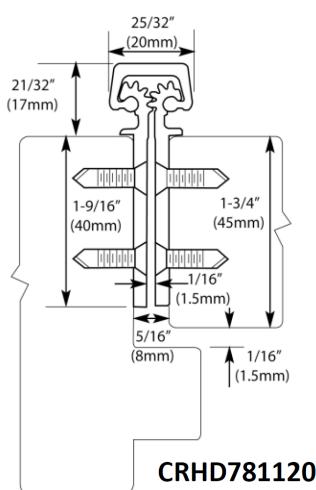
Will cover hinge cut outs in frames

Flush mount no inset

Frame and door leaf alignment ribs for proper hinge location

• **ELECTRIFICATION:**

Available. See page 25



Full Surface • Any Door Material • Heavy Duty

Heavy Duty for high frequency 1 3/4" doors or heavy medium frequency doors up to 450 lbs.

CRHD781570 (Heavy Duty), CRHD782100 (Heavy Duty), CRHD780570 (Heavy Duty)

MODEL#	LENGTH		SCREW COUNT		CLEARANCE
	IN	CM	DOOR	JAMB	
CRHD781570	83	210.8	19	19	1/32" (1mm) minimum recommended for hinge side plus standard lock case clearance
CRHD781570	95	241.3	20	20	
CRHD782100	83	210.8	19	19	1/32" (1mm) minimum recommended for hinge side plus standard lock case clearance
CRHD782100	95	241.3	20	20	1 5/8" (41mm) minimum frame face required plus 3/16" (5mm) rotational clearance
CRHD780570	83	210.8	8	8	
CRHD780570	95	241.3	9	9	1/32" (1mm) minimum required between doors

• **FASTENERS:**

Self-Tapping screws

Full Surface Hinges

1) Frame Portion

- a) All fasteners are No. 12-24 x 1/16" Type C, FHUC
 - i) Heavy Duty Hinges - 10 required for each leaf
 - ii) Wood Screw - on request (specify on order)

2) Door Portion

- a) Thrubolt 1/4 -20 x 1 5/8" PCH
 - i) Heavy Duty Hinges – 6 required for each leaf
- b) Shoulder bolt 1/4 -20 x 1" PCH
 - i) Heavy Duty Hinges – 6 required
- c) Pan Head Self Drilling No. 12 x 3/4"
 - i) Heavy Duty Hinges – 4 required

• **LENGTH OPTIONS:**

83" & 95"

• **DOOR REINFORCEMENT:**

None needed

• **FRAME REINFORCEMENT:**

None needed to 200 lbs.

Use 16 gauge channel over 200 lbs

• **FIRE RATING:**

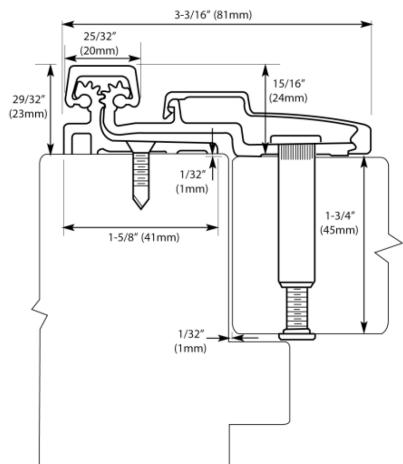
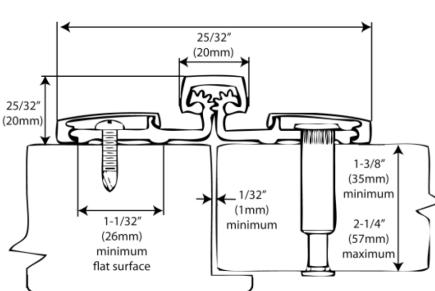
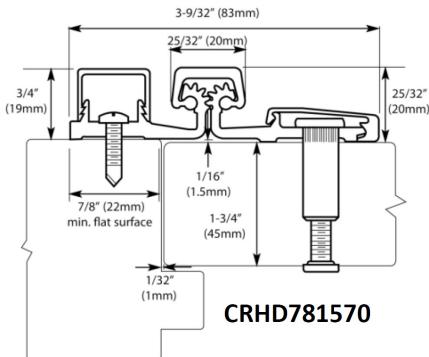
Up to 3 Hours.

• **SPECIAL FEATURES:**

Replacement for existing doors and frames

7/8" minimum frame

1/16" inset



Half Surface • Any Door Material • Heavy Duty

Heavy Duty for high frequency 1 3/4" doors or heavy medium frequency doors up to 450 lbs.

CRHD780530 (Heavy Duty)

MODEL#	LENGTH		SCREW COUNT		CLEARANCE
	IN	CM	DOOR	JAMB	
CRHD780530	83	210.8	8	9	
CRHD780530	95	241.3	19	19	5/32" (4mm) minimum recommended hinge side plus standard lockside clearance

- FASTENERS:**

Self-Tapping screws

Full Surface Hinges

1) Frame Portion

- a) All fasteners are No. 12-24 x 1/16" Type C, FHUC
 - i) Heavy Duty Hinges - 10 required for each leaf
 - ii) Wood Screw - on request (specify on order)

2) Door Portion

- a) Thrubolt 1/4 -20 x 1 5/8" PCH
 - i) Heavy Duty Hinges – 6 required for each leaf
- b) Shoulder bolt 1/4 -20 x 1" PCH
 - i) Heavy Duty Hinges – 6 required
- c) Pan Head Self Drilling No. 12 x 3/4"
 - i) Heavy Duty Hinges – 4 required

- LENGTH OPTIONS:**

83" & 95"

- DOOR REINFORCEMENT:**

None needed

- FRAME REINFORCEMENT:**

None needed to 200 lbs.

Use 16 gauge channel over 200 lbs

- FIRE RATING:**

Up to 3 Hours.

- SPECIAL FEATURES:**

For new construction

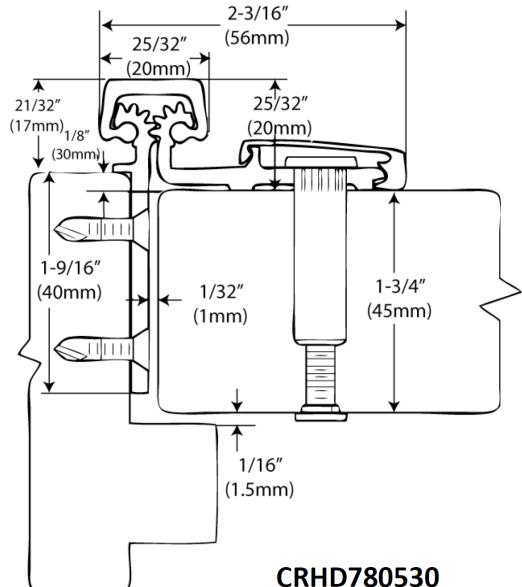
For renovation with new doors and / or frames

No mortising of doors or frames required

Will cover hinge cut outs in frames

Flush mount no inset

Frame and door leaf alignment ribs for proper hinge location



CRHD780530

► Electrification

CODE	NO. OF WIRES	CONTINUOUS HINGE ELECTRIFICATION MODIFICATIONS FOR CRHD781120 AND CRHD782240 ONLY
CET8	8	Removable 12" Aluminum Gear Hinge. Can be removed for adjustment and service.
EPT	--	Cut-out according to Von Duprin Part # EPT-10 and Cal-Royal CRPT-10, CRPT-10C and CRPT-2 location

TO ELECTRIFY: Prefix **CODE** before **PART#**.

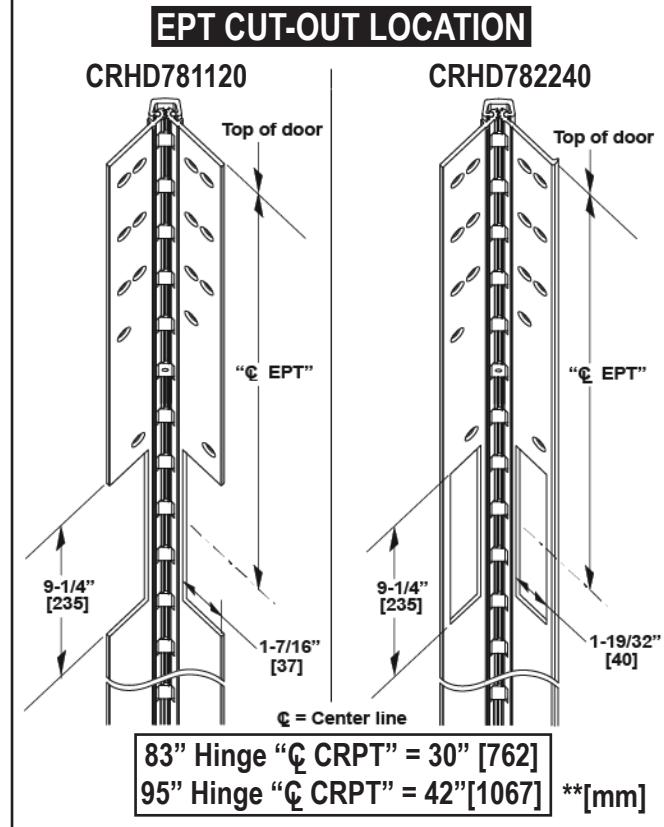
For Example: To order 8-wire on 1 piece of CRHD781120 ALUM Gear hinge with a length of 83", use "**CET8CRHD78112083 CLEAR**"



CET8CRHD782240



CET8CRHD781120



FOR OTHER LOCATIONS CONSULT FACTORY

CONTINUOUS HINGE MODEL CROSS REFERENCE

CAL-ROYAL	ROTON	PEMKO	MARKAR	MCKINNEY	ZERO	STANLEY	ABH	SELECT
CRHD781120	780-112HD	FMSLFHD	FM2000	MCK12HD	910DB	661HD	A110HD	SL11HD
CRHD782240	780-224HD	FMHD	FM2001	MCK25HD	914DB	662HD	A240HD	SL24HD
CRHD781570	780-157HD	FSCPHD	---	MCK58HD	935DB	664HD	A570HD	SL57HD
CRHD782100	780-210HD	FSHD	FM2009	MCK22HD	930DB	665HD	A210HD	SL21HD
CRHD781110	780-111HD	FMSLIHD	---	MCK-14HD	---	---	A111HD	SL18HD
CRHD780530	780-053HD	---	---	---	925DB	---	A530HD	SL53HD
CRHD780570	---	---	FS 2002	---	---	---	A571HD	SL60HD