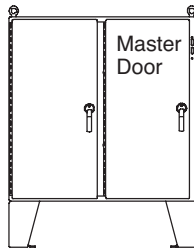


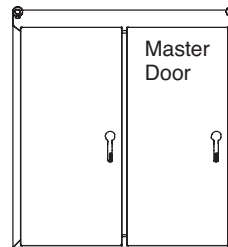
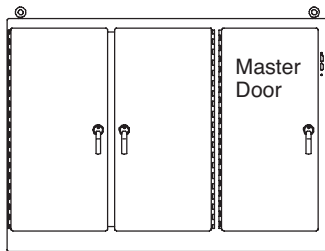
## OPERATOR ADAPTER APCSDA

Installation Instructions for Square “D” Bulletin 9422 Variable Depth  
and Flexible Cable Operating Mechanisms  
(For parts list, see page 2)

For floor-mounted enclosures with disconnect on the right flange,  
see pages 3-6 (flexible cable mechanism, see pages 15-19)



For one-, two-, and three-door free-standing enclosures with the disconnect on  
the right flange, see pages 7-10 (flexible cable mechanism, see pages 15-19)



For floor-mounted enclosures with the disconnect on the centerpost,  
see pages 11-14 (flexible cable mechanism, see pages 15-19)



## **WARNING**

The functions, fits, and clearances of the installation described hereon are calculated from information supplied by the manufactures of the equipment to be installed. Be certain to check the function, fits, and clearances of all equipment both before and after installation to assure that is operates properly and safely and meets all applicable codes, standards, and regulations.

In the event the completed installation does not function properly or fails to meet any such codes, standards, or regulations, do not attempt to make alterations or operate the equipment. Report such facts immediately to:

Hoffman Customer Service  
2100 Hoffman Way  
Anoka, MN 55303  
763 422 2211  
<http://hoffman.nvent.com/contact-us>

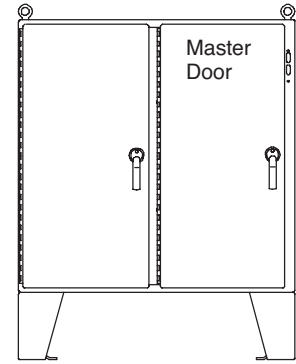
### PARTS LIST

#### Operator Adapter, Catalog Number APCSDA, for Square "D" Bulletin 9422 Disconnects

<u>Item No</u>	<u>Part Name</u>	<u>Part No</u>	<u>Quantity</u>
1	Mounting Plate for Sq. D 9422	87400023	1
2	Slide Arm	26250001	1
3	Shoulder Collar	26149001	1
4	Screw, 1/4-20x7/8 Hex HD	99401030	1
5	Lockwasher, 1/4 Spring	99401318	1
6	Washer, Flat	22101003	2
7	Lockwasher, 1/4 Int.	99401300	2
8	Nut, 1/4-20 Hex	99401406	2
9	Door Catch	23101002	1
10	Screw, 10-32x3/8 Pan HD	99401007	2
11	Lockwasher, #10 Int.	99401307	2
12	Label, (extra)	26147001	1
13	Installation Instruction	87415443	1

## INTRODUCTION

This installation instruction is for Square "D" Bulletin 9422 (variable depth) mechanisms. These mechanisms are for disconnect switches and circuit breakers mounted in Hoffman two-door floor-mounted, enclosures with the disconnect on the right flange.



## INSTALLATION STEPS

**Step 1** – Install Handle return spring (furnished with Square "D" operating handle) through hole provided in mounting plate (item 1) as shown. The long hooked end of spring goes through hole in mounting plate. The short hook on other end will be attached to rod later.

**Step 2** – Position mounting plate (item 1) (with spring in place) on the inside of the enclosure, behind the opening provided in the flange.

**Step 3** – Discard the Square "D" stiffener bracket which is normally installed inside the enclosure flange.

**Step 4** – Assemble the Square "D" operating handle through opening in enclosure and through mounting plate. Omit cap screw and lockwasher which fits into bottom hole of square "D" operating handle.

**Step 5** – Install the slide arm (item 2) over the projecting part of the handle assembly (on Square "D" operating handle). Place the smaller diameter end of the shoulder collar (item 3) through the oval slot in the slide arm. Install long cap screw (item 4) with lockwasher (item 5) through shoulder collar into the bottom mounting hole of the Square "D" operating handle and tighten. The slide arm and interlock arm should move up and down smoothly. Install locking lever extension (Square "D" part) per Square "D" instructions.

**Step 6** – Attach the bottom of the slide arm (item 2) to the offset arm of the lock release mechanism. Use two flat washers (item 6), two lockwashers (item 7), and two hex nuts (item 8). Do not tighten until parts are adjusted. (see Step 7 – (B) )

**Step 7** – The handle safety lock release mechanism is adjustable in two places.

(A) Check the adjustment of the factory installed roller bracket. The door latch should hit against the latch stop portion of the roller bracket when the door is closed and latched. Adjust up or down if necessary. The attached mechanism will then provide the necessary up-down motion required to operate the release mechanism.

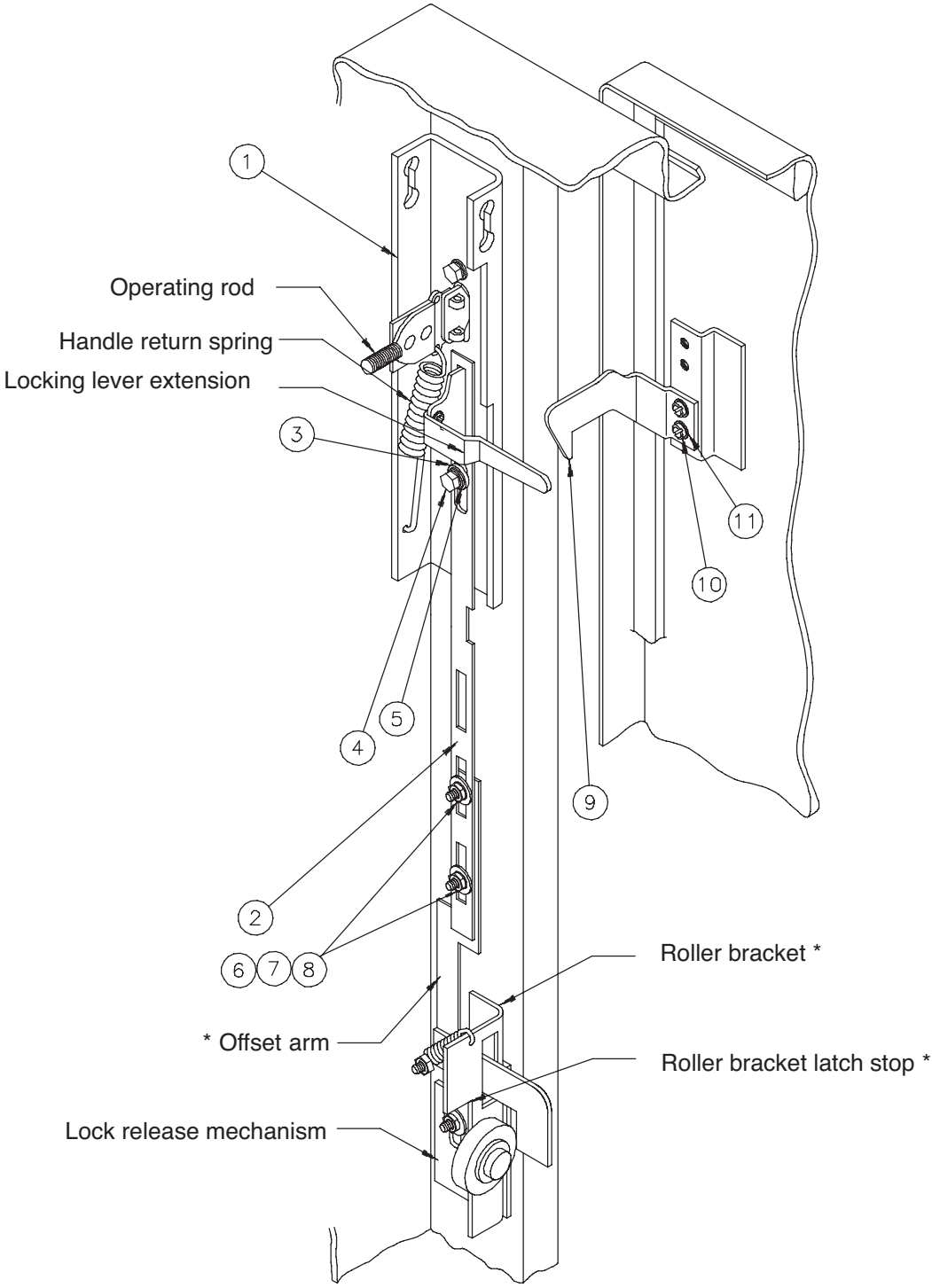
(B) Adjust the length of the slide arm assembly. With proper adjustment of the slide arm, the safety lock (on Square "D" handle operator) should release just before the master door is fully latched. Lengthen slide arm if safety lock releases too soon. Shorten slide arm if safety lock releases too late.

**Step 8** – Attach the door catch (item 9), provided by Hoffman, to the tapped spacer on the door using the bottom set of mounting holes. Use two screws (item 10) and lockwashers (item 11). The door catch prevents the door from being opened when the switch is in the "ON" position. The door catch may be easily bent up or down to hook properly on the locking lever extension of the Square "D" handle operator.

**Step 9** – Drill and tap holes in panel as shown in diagram and table. See Square "D" instructions for locating holes for fuse clips.

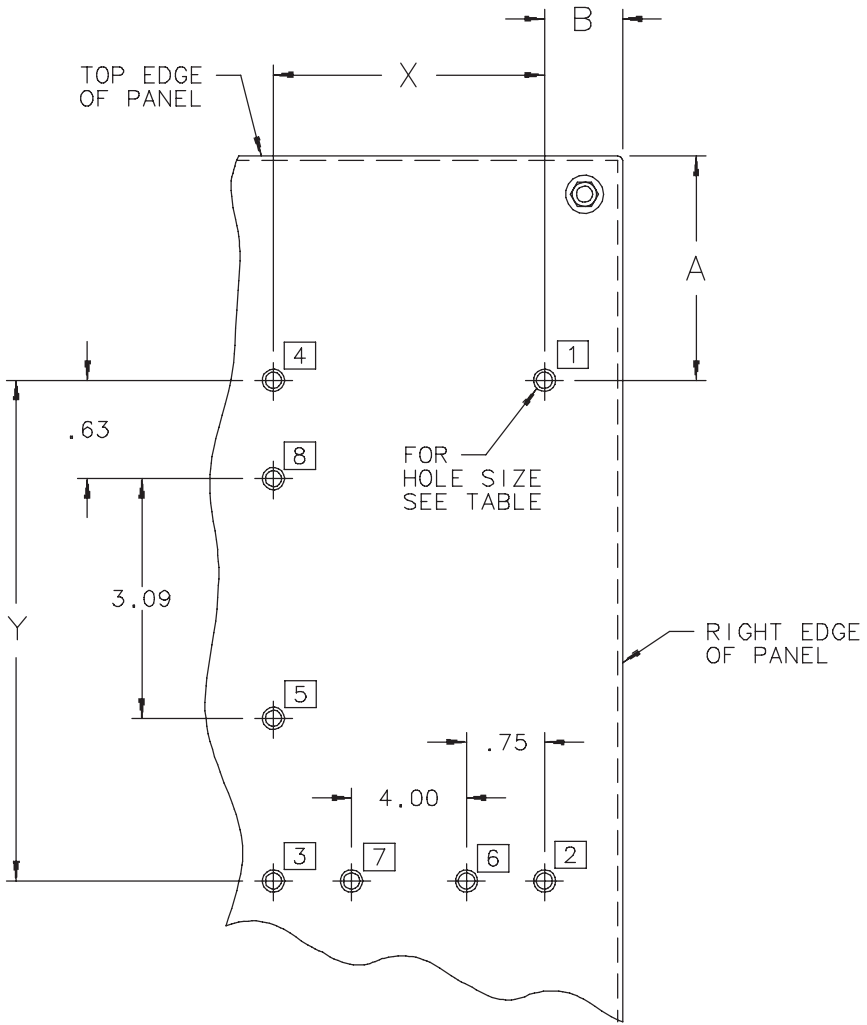
**Step 10** – Mount switch or circuit breaker using Square "D" instructions and parts. Square "D" operating rod (and stiffener rod, if used) must be cut off per Square "D" instructions. See table 2 for depth dimensions use to determine length of rods.

For Floor-Mounted, Two-Door Enclosures With Disconnect on Right Flange



\* Parts of lock release mechanism

For Floor-Mounted, Two-Door Enclosures With Disconnect on Right Flange



For Floor-Mounted, Two-Door Enclosure With Disconnect on Right Flange

**TABLE 1**

SQUARE "D" OPERATING MECHANISM	No. of Holes	Mtg. Hole Position	Mtg. Hole Size	Enclosure Height		B	X	Y
				60.12	72.12			
				A	A			
TCN,TCF	4	1,4,6,7	10-24	4.81	10.81	.50	5.50	4.50
TDN,TDF	4	1,4,6,7	10-24	4.81	10.81	.50	5.50	4.50
TEN,TEF	4	1,4,6,7	10-24	4.81	10.81	.50	5.50	4.50
TC	4	1,2,5,8	10-24	4.62	10.62	.50	5.13	6.50
TD	4	1,4,6,7	10-24	4.81	10.81	.59	5.19	5.25
TE	4	1,2,3,4	1/4-20	3.19	9.19	1.97	5.50	6.50
TF	4	1,2,3,4	5/16-18	2.56	8.56	1.44	9.44	8.00
RG1	4	1,2,3,4	8-32	4.81	10.81	1.59	1.44	3.94
RN1	4	1,2,3,4	8-32	5.34	11.34	1.50	1.59	5.13
RP1	4	1,2,3,4	10-24	5.34	11.34	1.69	1.50	7.13
RR-1	4	1,2,3,4	1/4-20	----	10.69	.31	6.63	6.56
	4	1,2,3,4	.375 Dia.	----	9.31	2.63	2.00	9.25

**TABLE 2**

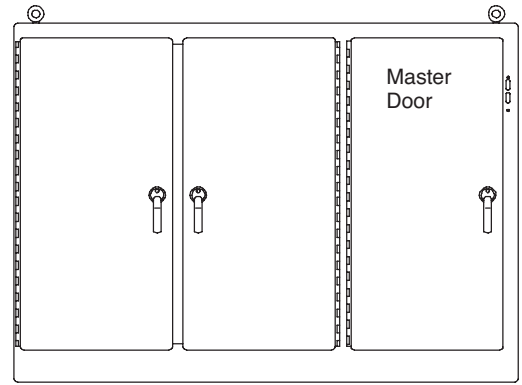
Hoffman Disconnect Enclosure Description	Enclosure Depth	Square "D" (1)
	C	D
Two -Door, Floor-Mounted Disconnect on Right Flange	12.13	10.91
	18.13	16.91
	24.13	22.91 (2)

1) This dimension is used to determine the length to cut off Square "D" operating rods. Use .125 for "T" dimension. See Square "D" instructions.

2) This dimension is greater than the depth range of standard Square "D" operating / stiffener rods. A six inch high platform is provided with this enclosure to reduce the depth for disconnect mounting. The platform can be eliminated if Square "D" 9422-R2 long operating rod(s) are used. Some devices require two operating rods.

## INTRODUCTION

This installation instruction is for Square "D" Bulletin 9422 (variable depth) mechanisms. These mechanisms are for disconnect switches and circuit breakers mounted in Hoffman one-, two-, and three-door, free-standing enclosures with the disconnect on the right flange.



## INSTALLATION STEPS

**Step 1** - Install handle return spring (furnished with Square "D" operating handle) through hole provided in mounting plate (item 1) as shown. The long hooked end of spring goes through hole in mounting plate. The short hook on the other end will be attached to the rod later.

**Step 2** - Position Mounting plate (item 1) (with spring in place) on the inside of the enclosure. Behind the opening provided in the flange.

**Step 3** - Discard the Square "D" stiffener bracket which is normally installed inside the enclosure flange.

**Step 4** - Assemble the Square "D" operating handle through the opening in enclosure and through mounting plate. Omit cap screw and lockwasher which fits into bottom hole of Square "D" operating clippers handle.

**Step 5** - Install the slide arm (item 2) over the projecting part of the handle assembly (on Square "D" operating handle). Place the smaller diameter end of the shoulder collar (item 3) through the oval slot in the slide arm. Install long cap screw (item 4) with lockwasher (item 5) through shoulder collar into the bottom mounting hole of the Square "D" operating handle and tighten. The slide arm and interlock arm should move up and down smoothly. Install locking lever extension (Square "D" part) per Square "D" instructions.

**Step 6** - Attach the bottom of the slide arm (item 2) to the offset arm of the lock release mechanism. Use two flat washers (item 6), two lockwashers (item 7), and two hex nuts (item 8). Do not tighten until parts are adjusted. (see Step 7 - (B) )

**Step 7** - The handle safety lock release mechanism is adjustable in two places.

(A) Check the adjustment of the factory installed roller bracket. The door latch should hit against the latchstop portion of the roller bracket when the door is closed and latched. Adjust up or down if necessary. The attached mechanism will then provide the necessary up-down motion required to operate the release mechanism.

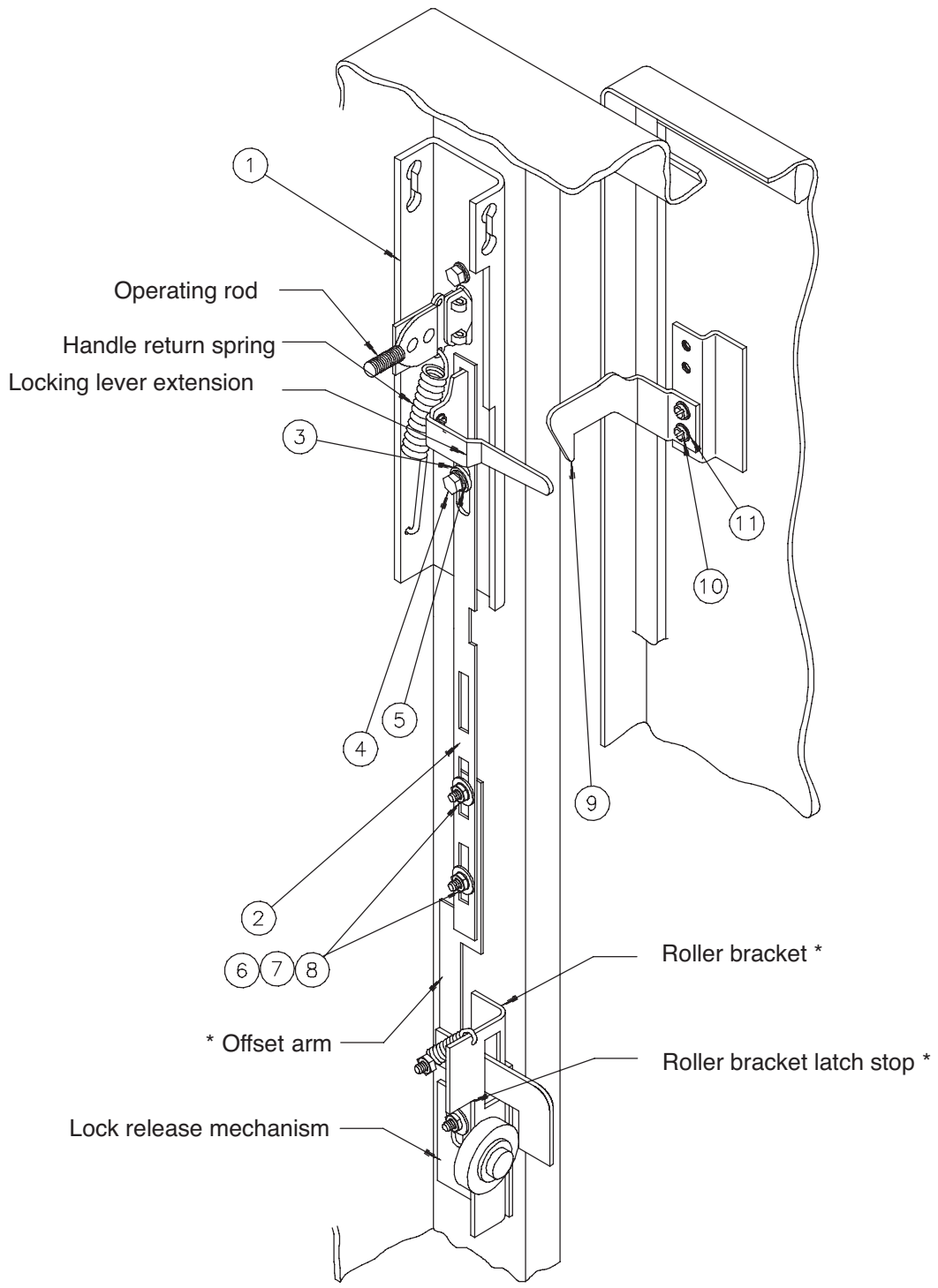
(B) Adjust the length of the slide arm assembly. With proper adjustment of the slide arm, the safety lock (on Square "D" handle operator) should release just before the master door is fully latched. Lengthen slide arm if safety lock releases too soon. Shorten slide arm if safety lock releases too late.

**Step 8** - Attach the door catch (item 9), provided by Hoffman, to the tapped spacer on the door using the bottom set of mounting holes. Use two screws (item 10) and lockwashers (item 11). The door catch prevents the door from being opened when the switch is in the "ON" position. The door catch may be easily bent up or down to hook properly on the locking lever extension of the Square "D" handle operator.

**Step 9** - Drill and tap holes in panel as shown in diagram and table. See Square "D" instructions for locating holes for fuse clips.

**Step 10** - Mount switch or circuit breaker using Square "D" instructions and parts. Square "D" operating rod (and stiffener rod, if used) must be cut off.

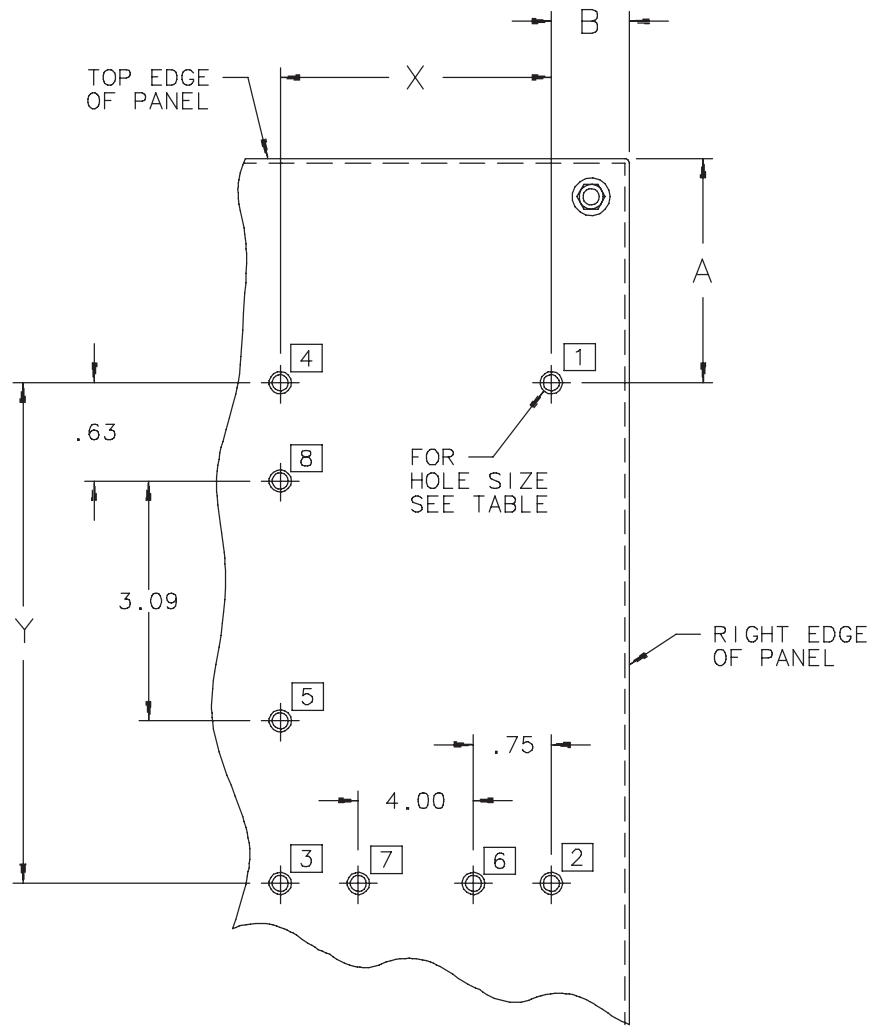
For One-, Two-, and Three-Door, Free-Standing Enclosure with Disconnect on Right Flange



\* Parts of lock release mechanism



For One-, Two-, and Three-Door, Free-Standing Enclosures With Disconnect on Right Flange



For One-, Two-, and Three-Door, Free-Standing Enclosures With Disconnect on Right Flange

**TABLE 1**

SQUARE "D" OPERATING MECHANISM	No. of Holes	Mtg. Hole Position	Mtg. Hole Size	Enclosure Height					B	X	Y
				60.81	72.12	74.81	84.12	90.12			
				A	A	A	A	A			
TCN,TCF	4	1,4,6,7	10-24	5.26	6.81	11.26	12.81	15.81	.50	5.50	4.50
TDN,TDF	4	1,4,6,7	10-24	5.26	6.81	11.26	12.81	15.81	.50	5.50	4.50
TEN,TEF	4	1,4,6,7	10-24	5.26	6.81	11.26	12.81	15.81	.50	5.50	4.50
TC	4	1,2,5,8	10-24	5.08	6.63	11.08	12.63	15.63	.50	5.13	6.50
TD	4	1,2,4,7	10-24	11.26	6.81	11.26	12.81	15.81	.59	5.19	5.25
TE	4	1,2,3,4	1/4-20	3.64	5.19	9.64	11.19	14.19	1.97	5.50	6.50
TF	4	1,2,3,4	5/16-18	3.01	4.56	9.01	10.56	13.56	1.44	9.44	8.00
RG1	4	1,2,3,4	8-32	5.26	6.81	11.26	12.81	15.81	1.59	1.18	3.94
RN1	4	1,2,3,4	8-32	5.79	7.34	11.79	13.34	16.34	1.50	1.50	5.13
RP1	4	1,2,3,4	10-24	5.79	7.34	11.79	13.34	16.34	1.69	1.50	7.13
RR 1	4	1,2,3,4	1/4-20	---	---	---	12.69	15.69	.31	6.69	6.56
	4	1,2,3,4	.375 Dia.	---	---	---	11.31	14.31	2.63	2.00	9.25
RT-1 For MAL, MHL	4	1,2,3,4	1/4-20	---	---	---	10.56	13.56	.34	9.69	10.69
	4	1,2,3,4	.500 Dia.	---	---	---	10.56	13.56	3.68	3.00	10.69
RR-1 For MEL	4	1,2,3,4	1/4-20	---	---	---	10.56	13.56	.34	9.69	10.69
	4	1,2,3,4	.500 Dia.	---	---	---	10.56	13.56	3.68	3.00	11.44

**TABLE 2**

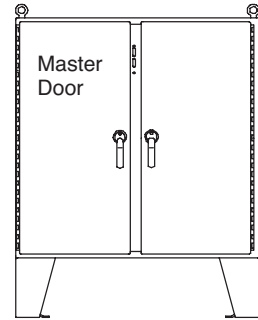
Hoffman Disconnect Enclosure Description	Enclosure Depth	Square "D" (1)
	C	D
One - and Two -Door, Free-Standing Disconnect on Right Flange	18.13	16.91
	20.13	18.91
	24.13	22.91 (2)
Three-Door, Free-Standing Disconnect on Right Flange	18.13	15.91
	24.13	21.91 (2)
Two -Door, Free-Standing Disconnect on Right Flange	12.12	9.90
	18.12	15.90
	24.12	21.90 (2)

1) This dimension is used to determine the length to cut off Square "D" operating rods. Use .125 for "T" dimension. See Square "D" instructions.

2) This dimension is greater than the depth range of standard Square "D" operating / stiffener rods. A six inch high platform is provided with this enclosure to reduce the depth for disconnect mounting. The platform can be eliminated if Square "D" 9422-R2 long operating rod(s) are used. Some devices require two operating rods.

## INTRODUCTION

This installation instruction is for Square "D" Bulletin 9422 (variable depth) mechanisms. These mechanisms are for disconnect switches and circuit breakers mounted in Hoffman two-door, floor-mounted enclosures with the disconnect on the centerpost.



## INSTALLATION STEPS

**Step 1** - Install handle return spring (furnished with Square "D" operating handle) through hole provided in mounting plate (item 1) as shown. The long hooked end of spring goes through hole in mounting plate. The short hook on the other end will be attached to the rod later.

**Step 2** - Position Mounting plate (item 1) (with spring in place) on the inside of the enclosure, behind the opening provided in the centerpost.

**Step 3** - Discard the Square "D" stiffener bracket which is normally installed inside the enclosure flange.

**Step 4** - Assemble the Square "D" operating handle through opening in enclosure and through mounting plate. Omit cap screw and lockwasher which fits into bottom hole of Square "D" operating handle.

**Step 5** - Cut 2 1/2" off bottom end of slide arm (item 2) (bottom end has rectangular holes only).

**Step 6** - Install the slide arm (item 2) over the projecting part of the handle assembly (on Square "D" operating handle). Place the smaller diameter end of the shoulder collar (item 3) through the oval slot in the slide arm. Install long cap screw (item 4) with lockwasher (item 5) through shoulder collar into the bottom mounting hole of the Square "D" operating handle and tighten. The slide arm and interlock arm should move up and down smoothly. Install locking lever extension (Square "D" part) per Square "D" instructions.

**Step 7** - Attach the bottom of the slide arm (item 2) to the offset arm. Use two flat washers (item 6), two lockwashers (item 7), and two hex nuts (item 8). Do not tighten until parts are adjusted.

**Step 8** - Adjust the length of the slide arm assembly. With proper adjustment of the slide arm, the safety lock (on Square "D" handle operator) should release just before the master door is fully latched. Lengthen slide arm if safety lock releases too soon. Shorten slide arm if safety lock releases too late.

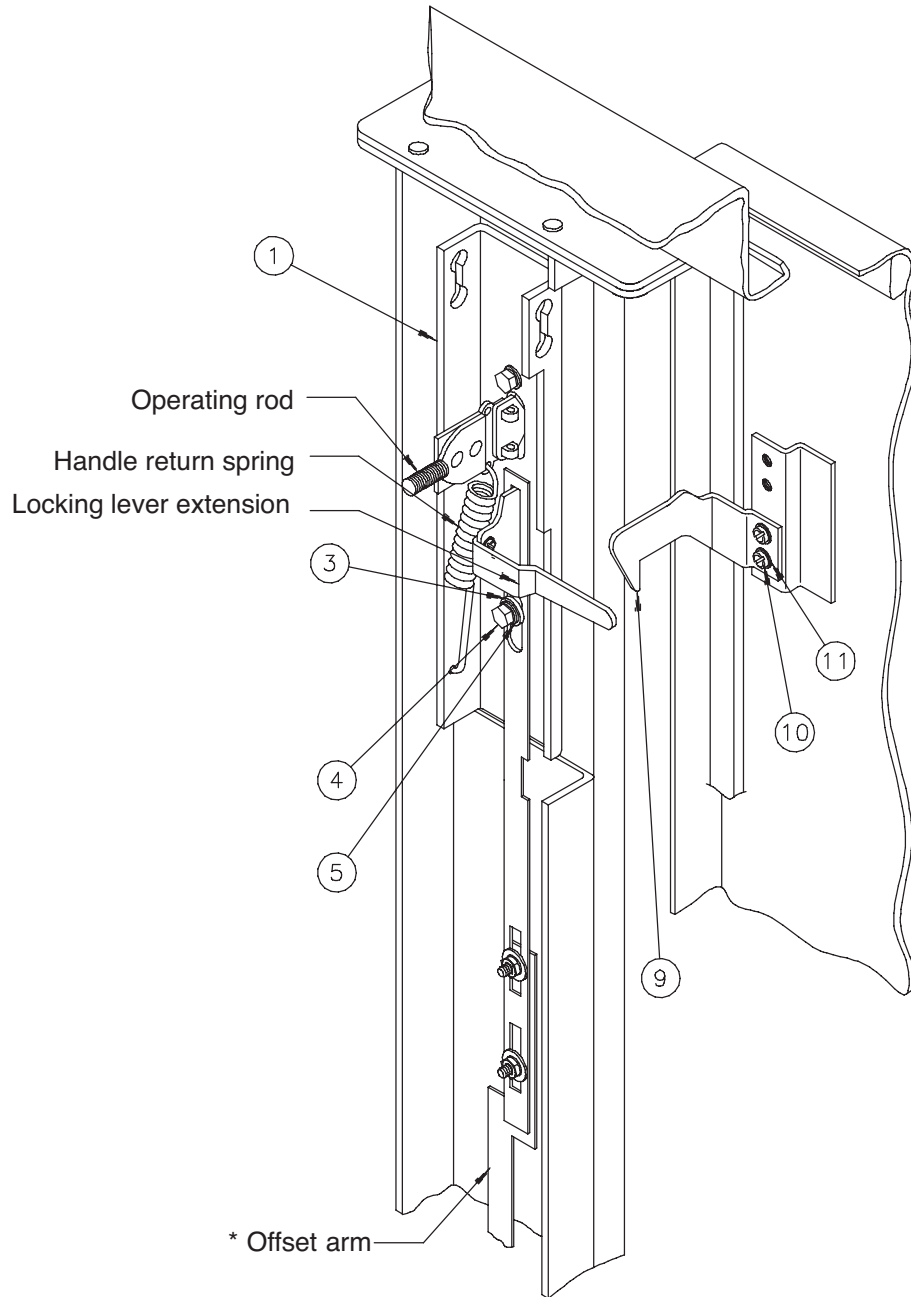
**Step 9** - Attach the door catch (item 9), provided by Hoffman, to the tapped spacer on the door using the bottom set of mounting holes. Use two screws (item 10) and lockwashers (item 11). The door catch prevents the door from being opened when the switch is in the "ON" position. The door catch may be easily bent up or down to hook properly on the locking lever extension of the Square "D" handle operator.

**Step 10** - Drill and tap holes in panel as shown in diagram and table. See Square "D" instructions for locating holes for fuse clips.

**Step 11** - Mount switch or circuit breaker using Square "D" instructions and parts. Square "D" operating rod (and stiffener rod, if used) must be cut off per Square "D" instructions. See table 2 for depth dimensions used to determine length of rods.

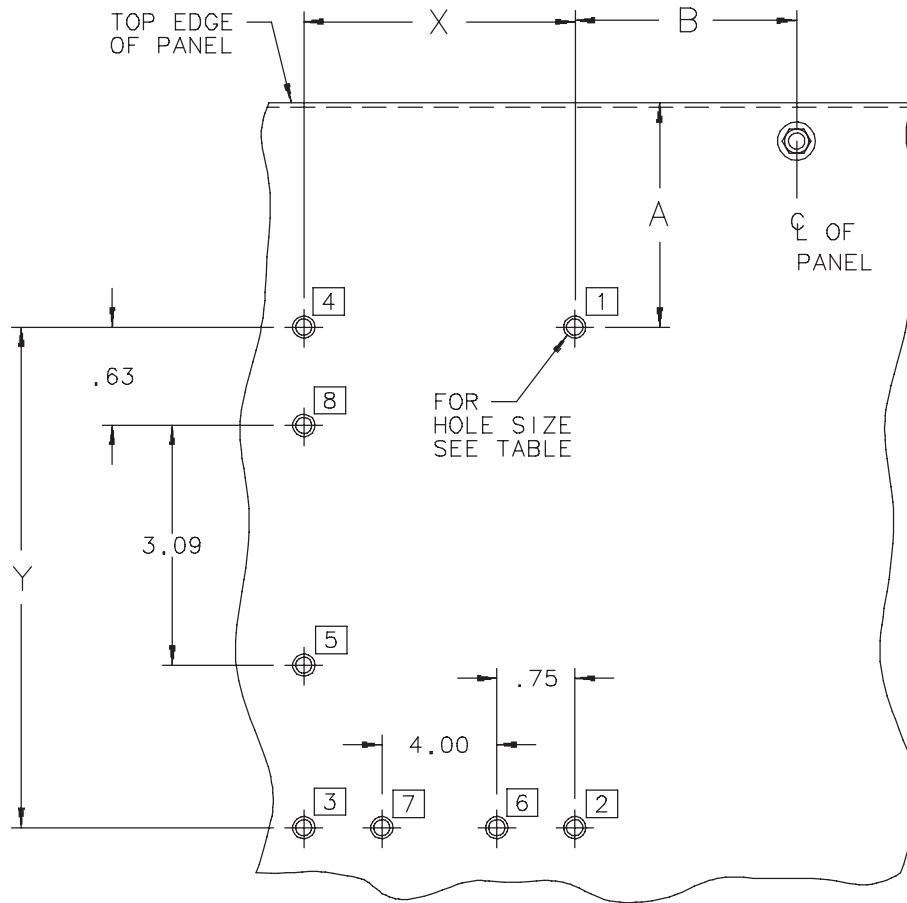
**\* NOTE: Optional channel / flange support kit, Square "D" class 9422 type C-1, is recommended when installing type TC, TD, RGI, RPI, RNI mechanisms in 72 1/8 high enclosures.**

For Floor-Mounted, Two-Door Enclosure With Disconnect on Centerpost.



\* Parts of lock release mechanism

For Floor-Mounted, Two-Door Enclosure With Disconnect on Centerpost.



For Floor-Mounted, Two-Door Enclosure With Disconnect on Centerpost

**TABLE 1**

SQUARE "D" OPERATING MECHANISM	No. of Holes	Mtg. Hole Position	Mtg. Hole Size	Enclosure Height		B	X	Y
				60.12	72.12			
				A	A			
TCN,TCF	4	1,4,6,7	10-24	4.81	10.81	1.69	5.50	4.50
TDN,TDF	4	1,4,6,7	10-24	4.81	10.81	1.69	5.50	4.50
TEN,TEF	4	1,4,6,7	10-24	4.81	10.81	1.69	5.50	4.50
TC	4	1,2,5,8	10-24	4.62	10.62	1.69	5.13	6.50
TD	4	1,2,4,7	10-24	4.81	10.81	1.78	5.19	5.25
TE	4	1,2,3,4	1/4-20	3.19	9.19	3.16	5.50	6.50
TF	4	1,2,3,4	5/16-18	2.56	8.56	2.63	9.44	8.00
RG1	4	1,2,3,4	8-32	4.81	10.81	2.78	1.44	3.94
RN1	4	1,2,3,4	8-32	5.34	11.34	2.69	1.50	5.13
RP1	4	1,2,3,4	10-24	5.34	11.34	2.88	1.50	7.13
RR-1	4	1,2,3,4	1/4-20	----	10.69	1.50	6.63	6.56
	4	1,2,3,4	.375 Dia.	----	9.31	3.81	2.00	9.25

**TABLE 2**

Hoffman Disconnect Enclosure Description	Enclosure Depth	Square "D" (1)
	C	D
Two -Door, Floor-Mounted Disconnect on Right Flange	12.13	10.91
	18.13	16.91
	24.13	22.91 (2)

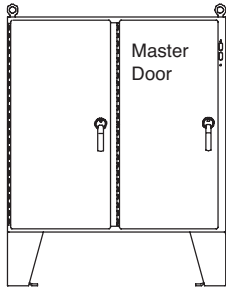
1) This dimension is used to determine the length to cut off Square "D" operating rods. Use .125 for "T" dimension. See Square "D" instructions.

2) This dimension is greater than the depth range of standard Square "D" operating / stiffener rods. A six inch high platform is provided with this enclosure to reduce the depth for disconnect mounting. The platform can be eliminated if Square "D" 9422-R2 long operating rod(s) are used. Some devices require two operating rods.

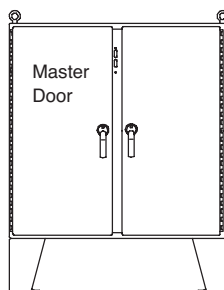
## INTRODUCTION

This installation instruction is for Square "D" Bulletin 9422 (flexible cable) mechanisms. These mechanisms are for disconnect switches and circuit breakers mounted in Hoffman disconnect enclosures.

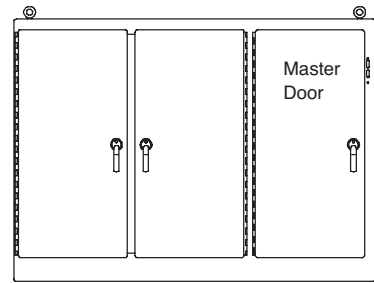
Two-door enclosure with disconnect on right flange



Two-door enclosure with disconnect on centerpost



One-, two-, and three-door enclosure with disconnect on right flange



## INSTALLATION STEPS

**Step 1** - Discard the Square "D" stiffener bracket and Hoffman mounting plate (item 1) which are normally installed inside the enclosure flange. Items are not needed for cable operators.

**Step 2** - Assemble the Square "D" operating handle and cable handle mechanism to the enclosure flange opening. Omit cap screw and lockwasher which fits into bottom hole of Square "D" operating handle.

**Step 3** - Modify slide arm (item 2) only if it is being installed in an enclosure with disconnect on centerpost. (cut 2.5 inches off the bottom end of slide arm. Bottom end has rectangular holes only)

**Step 4** - Install the slide arm (item 2) over the projecting part of the handle assembly (on Square "D" operating handle). Place the smaller diameter end of the shoulder collar (item 3) through the oval slot in the slide arm. Install long cap screw (item 4) with lockwasher (item 5) through shoulder collar into the bottom mounting hole of the Square "D" operating handle and tighten. The slide arm and interlock arm should move up and down smoothly. Install locking lever extension (Square "D" part) per Square "D" instructions.

**Step 5** - Attach the bottom of the slide arm (item 2) to the offset arm of the lock release mechanism. Use two flat washers (item 6), two lockwashers (item 7), and two hex nuts (item 8). Do not tighten until parts are adjusted. (see Step 6 - (B))

**Step 6** - The handle safety lock release mechanism is adjustable.

(A) Check the adjustment of the factory installed roller bracket on enclosures with disconnect on right flange. The door latch should hit against the latch stop portion of the roller bracket when the door is closed and latched. Adjust up or down if necessary. The attached mechanism will then provide the necessary up-down motion required to operate the release mechanism.

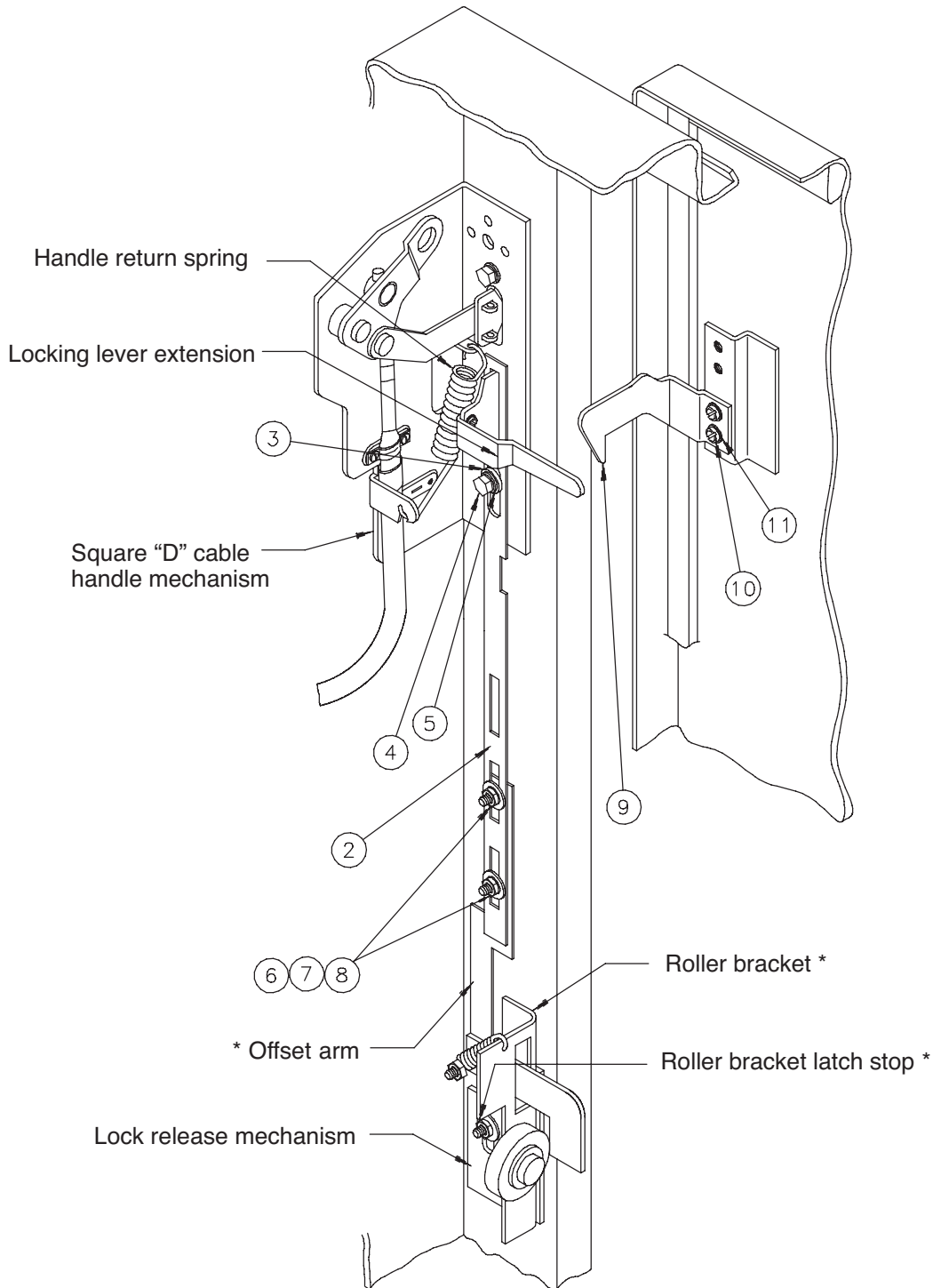
(B) Adjust the length of the slide arm assembly. With proper adjustment of the slide arm, the safety lock (on Square "D" handle operator) should release just before the master door is fully latched. Lengthen slide arm if safety lock releases too soon. Shorten slide arm if safety lock releases too late.

**Step 7** - Attach the door catch (item 9), provided by Hoffman, to the tapped spacer on the door using the bottom set of mounting holes. Use two screws (item 10) and lockwashers (item 11). The door catch prevents the door from being opened when the switch is in the "ON" position. The door catch may be easily bent up or down to hook properly on the locking lever extension of the Square "D" handle operator.

**Step 8** - Drill and tap holes in panel as shown in diagram and table. See Square "D" instructions for locating holes.

**Step 9** - Mount switch or circuit breaker using Square "D" instructions and parts."D" handle operator.

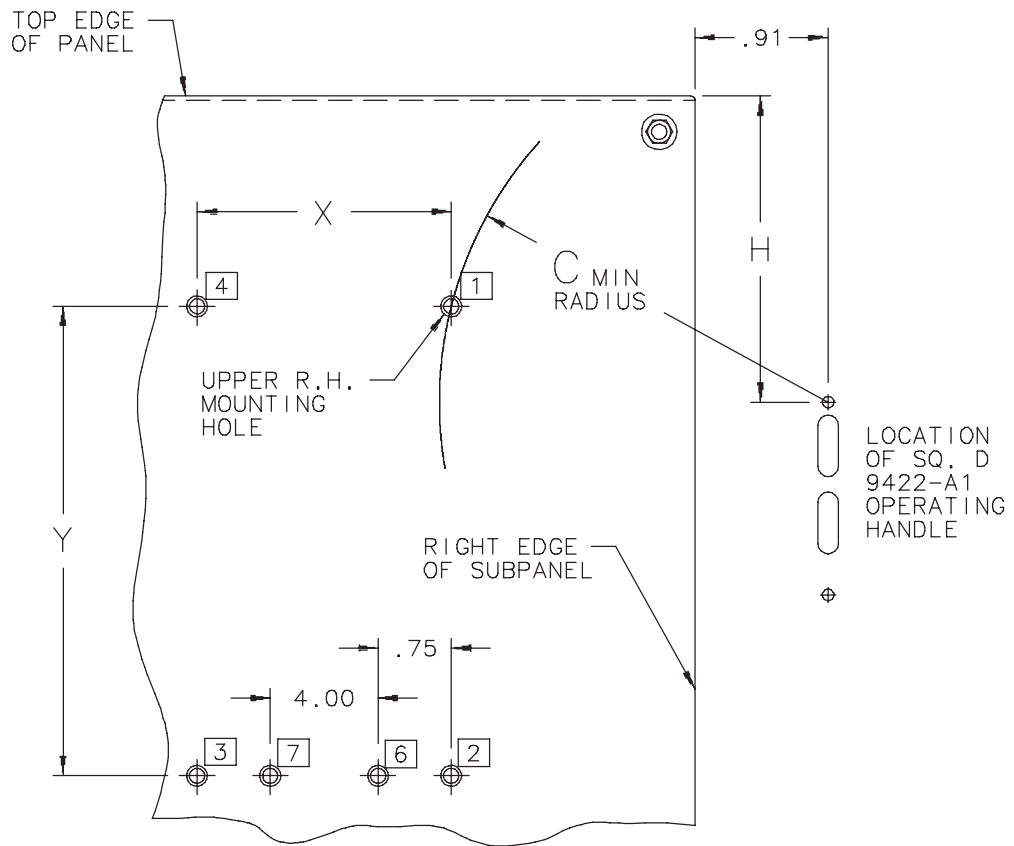
For Floor-Mounted, Two-Door Enclosures With Disconnect on Right Flange  
 For Floor-Mounted, Two-Door Enclosures With Disconnect on Centerpost  
 For One-, Two-, And Three-Door, Free-Standing Enclosures With Disconnect on Right Flange



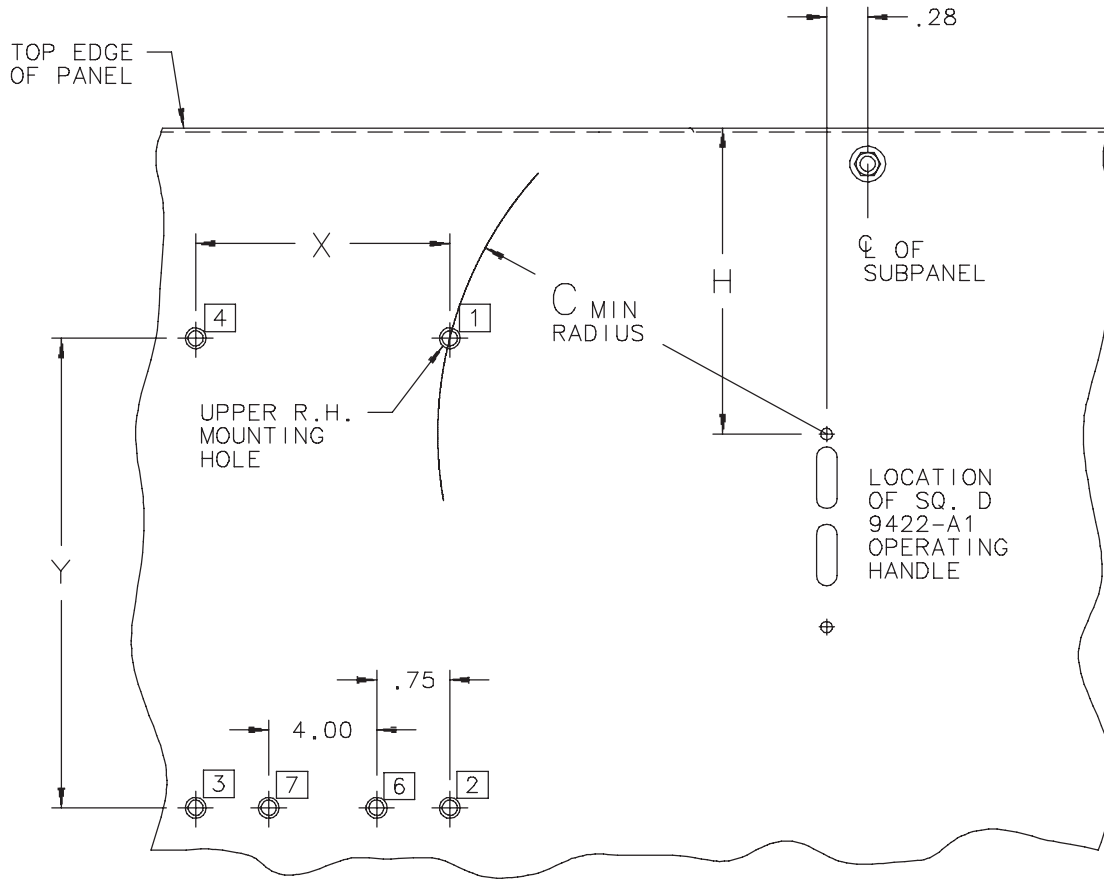
\* Parts of lock release mechanism on enclosures with disconnect on right flange



For Floor-Mounted, Two-Door Enclosures With Disconnect on Right Flange  
 For One-, Two-, And Three-Door, Free-Standing Enclosures With Disconnect on Right Flange



For Floor-Mounted, Two-Door Enclosures With Disconnect on Centerpost



For Floor-Mounted, Two-Door Enclosures With Disconnect on Right Flange  
 For Floor-Mounted, Two-Door Enclosures With Disconnect on Centerpost  
 For One-, Two-, And Three-Door, Free-Standing Enclosures With Disconnect on Right Flange

### Sub-Panel Drilling

CABLE MECHANISM	DISCONNECT MECHANISM	No. of Holes	Hole Position	Hole Size	X	Y	C <sub>min</sub> (1)
CFT	TCN, TCF	4	1,4,6,7	10-24	5.50	4.50	1.00
	TDN, TDF	4	1,4,6,7	10-24	5.50	4.50	1.00
	TEN, TEF	4	1,4,6,7	10-24	5.50	4.50	1.00
CGJ	GJL	4	1,2,3,4	8-32	1.18	3.94	2.50
CFA	FAL, FHL	4	1,2,3,4	8-32	1.50	5.13	3.75
CKA	KAL, KHL	4	1,2,3,4	10-24	1.50	7.13	3.75
CLA (2)	LAL LHL	4	1,2,3,4	1/4-20	6.63	6.56	2.25
		4	1,2,3,4	.375 Dia.	2.00	9.25	----

- 1) See Square "D" instructions for range of "C" dimension which vary for 36", 60" and 120" cable lengths.
- 2) See Square "D" instructions for relationship between 1/4-20 and .375 diameter holes for LA circuit break.

### Location of Disconnect Operating Handle

Hoffman Disconnect Enclosure Description	Enclosure Height	H
Two -Door, Free-Standing Disconnect on Right Flange	60.13	5.81
	72.13	11.81
	60.13	5.81
Three-Door, Floor-Mounted Disconnect on Centerpost	72.13	11.81
	72.13	7.81
One Through Six-Door, Modular Free-Standing Disconnect on Right Flange	72.13	13.81
	84.13	13.81
	90.13	16.81
Two -Door, Free-Standing Disconnect on Right Flange	62.81	6.26
	74.81	12.26



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