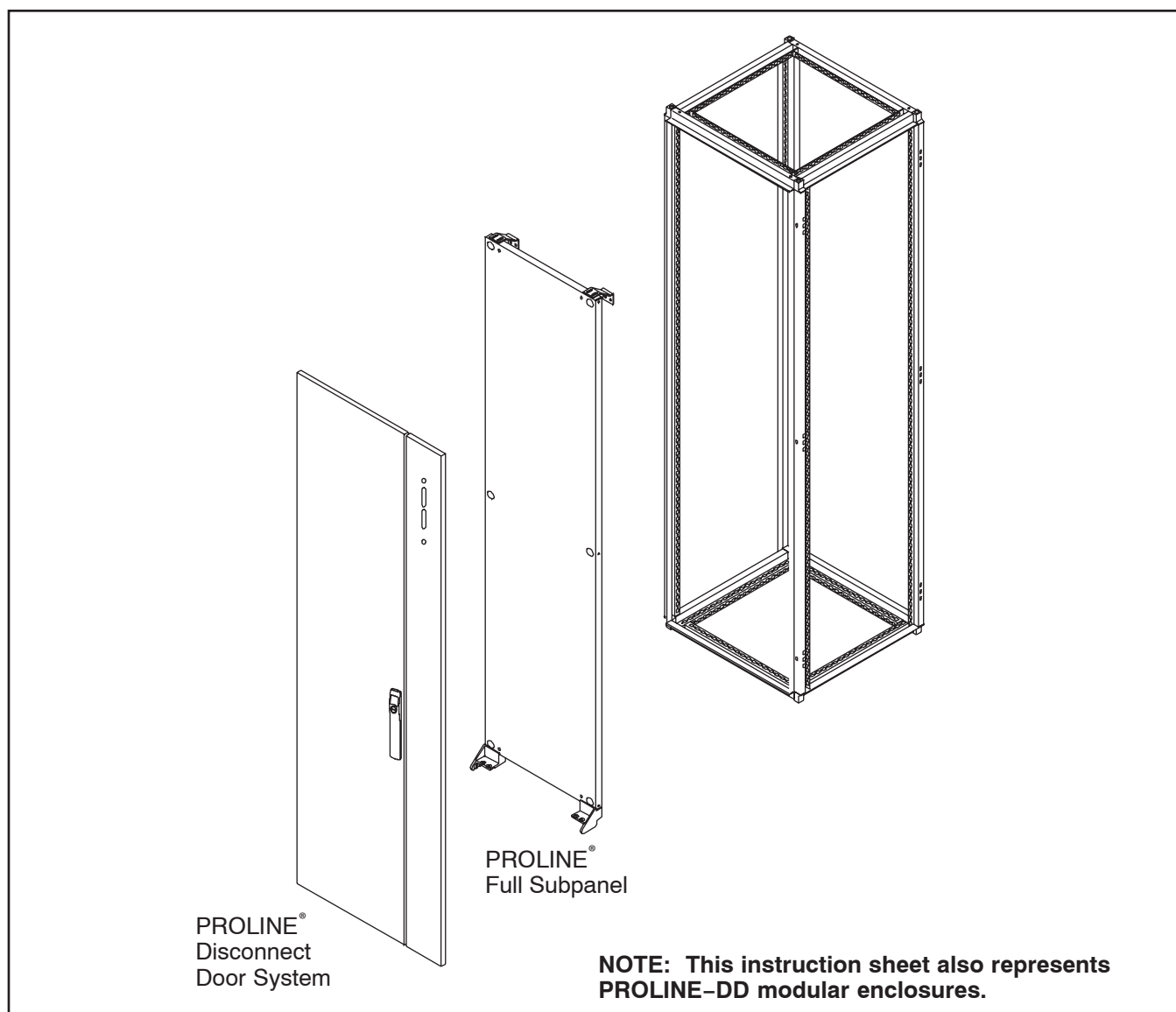


PROLINE®

Disconnect Door System Disconnect on Right Mullion



⚠ WARNING

The functions, fits, and clearances of the installation described hereon are calculated from information supplied by the manufacturers 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 it 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:

Customer Service Dept.
Pentair Technical Products Anoka
2100 Hoffman Way
Anoka, MN 55303-1745
(763) 422-2211

ITEM LIST

For Installation of PROLINE® Disconnect Door System on PROLINE® Modular Frame

Item No.	Part Name	Quantity
1	PROLINE® Disconnect Door System	1
	Door Assembly	
	Disconnect Mullion	
	Door Mounting Hardware	
2	Full Height Subpanel (see Table 1 or)	1
3	Panel Supports PMKPF (see Step 7)	Optional
4	Grid Straps (see Table 1 or Table 2, and Step 7)	Optional

Table 1

PROLINE® Disconnect Door System	Full Subpanel To Be Used	Grid Straps			
		400 Deep Frame	500 Deep Frame	600 Deep Frame	800 Deep Frame
PTDDC166	PPF166	PGH3S4	PGH3S5	PGH3S6	PGH3S8
PTDDC186	PPF186	PGH3S4	PGH3S5	PGH3S6	PGH3S8
PTDDC206	PPF206	PGH3S4	PGH3S5	PGH3S6	PGH3S8
PTDDC168	PPF168	PGH3S4	PGH3S5	PGH3S6	PGH3S8
PTDDC188	PPF188	PGH3S4	PGH3S5	PGH3S6	PGH3S8
PTDDC208	PPF208	PGH3S4	PGH3S5	PGH3S6	PGH3S8
PTDDC1810	PPF1810	PGH3S4	PGH3S5	PGH3S6	PGH3S8
PTDDC2010	PPF2010	PGH3S4	PGH3S5	PGH3S6	PGH3S8

Table 2

PROLINE-DD Modular Enclosure	Full Subpanel To Be Used	Grid Straps
PTDDC20185	PPF2018	PGH3S5
PTDDC20186	PPF2018	PGH3S6

INSTALLATION INSTRUCTIONS

Step 1 – Install PROLINE[®] disconnect door and disconnect mullion on a PROLINE[®] modular frame following PROLINE[®] disconnect door installation instructions.

Step 2 – Install the disconnect operating handle on disconnect mullion. Remove the pivot bracket shown in Figure 1. Follow disconnect manufacturers instructions to install and assemble operating handle.

Step 3 – Position the pivot bracket (removed in step 2) so that the interlock lever (on the disconnect operating handle) fits between the two adjustable studs. See Figure 1. Secure pivot bracket to disconnect mullion with shoulder collar and hex nut.

Step 4 – Close and latch the disconnect mullion to the PROLINE[®] frame. Sliding latches are provided at the top and bottom of the mullion. See Figure 1.

Step 5 – Adjust door interlock as follows:

a. Adjust studs on pivot bracket so pivot bracket is horizontal when disconnect operating handle is in the “OFF” (open) position. The interlock lever moves upward when the disconnect handle is operated to the “ON” (closed) position. This motion rotates the pivot bracket so it will engage with the door catch on the disconnect door. Adjust door catch up or down if necessary to provide proper engagement. See Figure 1.

b. Adjust lifting lever (mounted on latch rod). See Figure 1. The lifting lever moves upward as disconnect door is being latched. The lifting lever prevents the pivot bracket from rotating which releases the interlock lever on the disconnect operating handle. This action allows the disconnect operating handle to be operated to the “ON” (closed) position only when disconnect door latching is engaged to the frame.

NOTE: Proper adjustment will allow the operating handle to be placed on the “ON” position when the door is closed and will prevent the door from opening when the operating handle is in the “ON” position. If the door can be opened with the operating handle in the “ON” position, move the door catch up. (See Figure 1) If the operating handle cannot be pushed up into the “ON” position (with door closed), move the defeater lever on the latch door up slightly. See Figure 1.

Step 6 – Drill and tap mounting holes in subpanel for specific disconnect device being installed. See installation instructions index for appropriate panel drilling instructions.

Step 7 – Install subpanel in PROLINE[®] frame (per PROLINE[®] instructions) at desired depth (variable in increments of 25mm/.98 inches).

NOTE 1: Variable depth disconnects have a limited depth range. Select a depth for the subpanel that is within the depth range recommended by the disconnect manufacturer.

NOTE 2: Variable depth disconnects operate with a push-pull force from the disconnect operating handle. Larger disconnects have higher operating forces and may require that the subpanel be supported at the center to prevent bowing. Use an additional set of grid straps and a set of panel mounting supports catalog number PMKPF for this purpose.

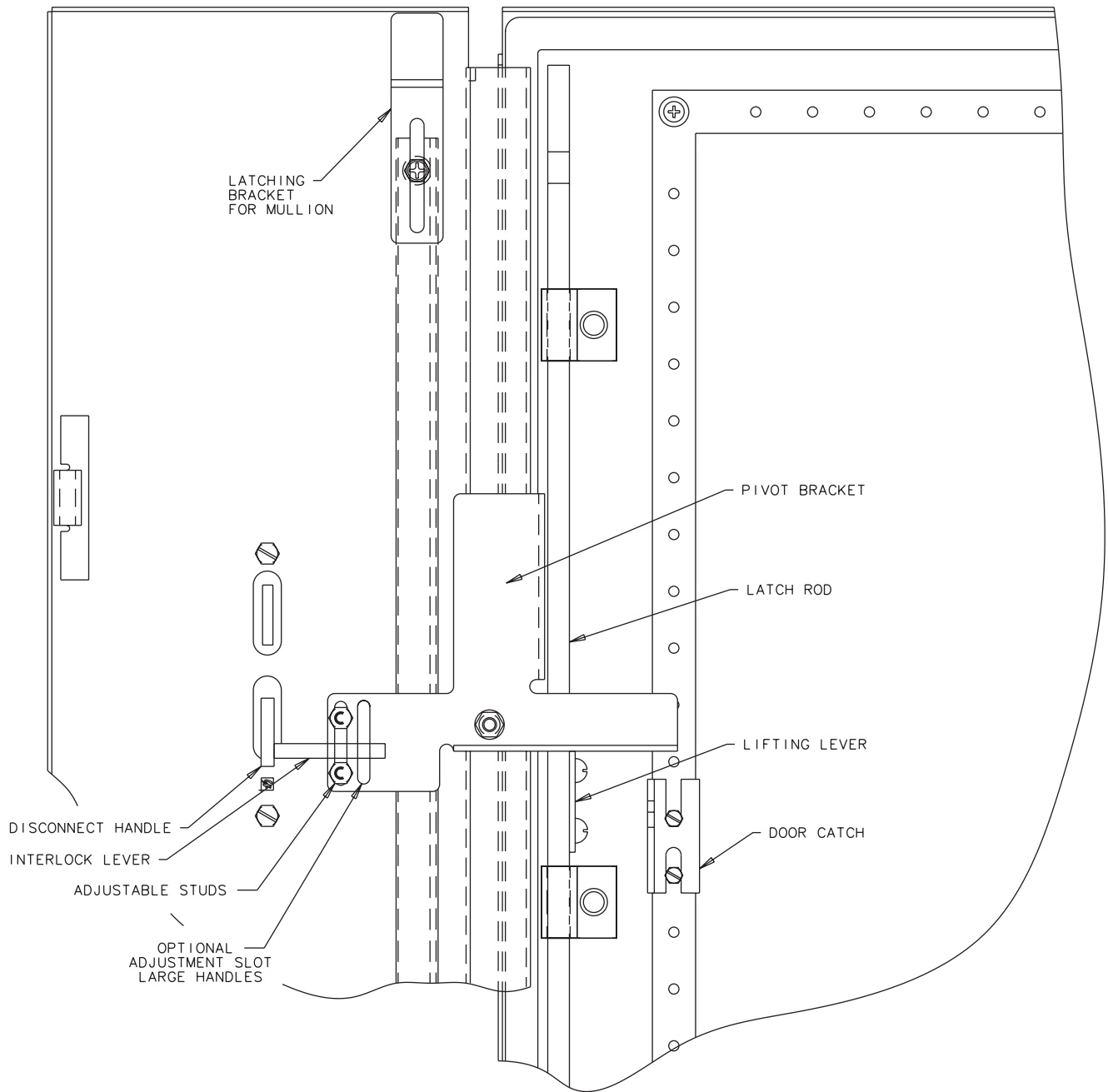


Figure 1

Installation Instruction Index		
<u>Brand of Disconnect</u>	<u>Type</u>	<u>See Pages</u>
Allen–Bradley 1494V	Variable Depth	6 and 7
Cutler–Hammer C361/C371	Variable Depth	8, 9, and 10
General Electric STDA	Variable Depth	12 and 13
Square D 9422	Variable Depth	14 and 15
Cutler–Hammer C371 Flex Shaft™	Flexible Cable	16 and 17
General Electric SCH	Flexible Cable	18 and 19
Siemens I–T–E Max Flex™	Flexible Cable	20 and 21
Square D 9422	Flexible Cable	22 and 23

PROLINE® Disconnect Door
Installation Instructions for Allen-Bradley 1494V (variable depth) Disconnects

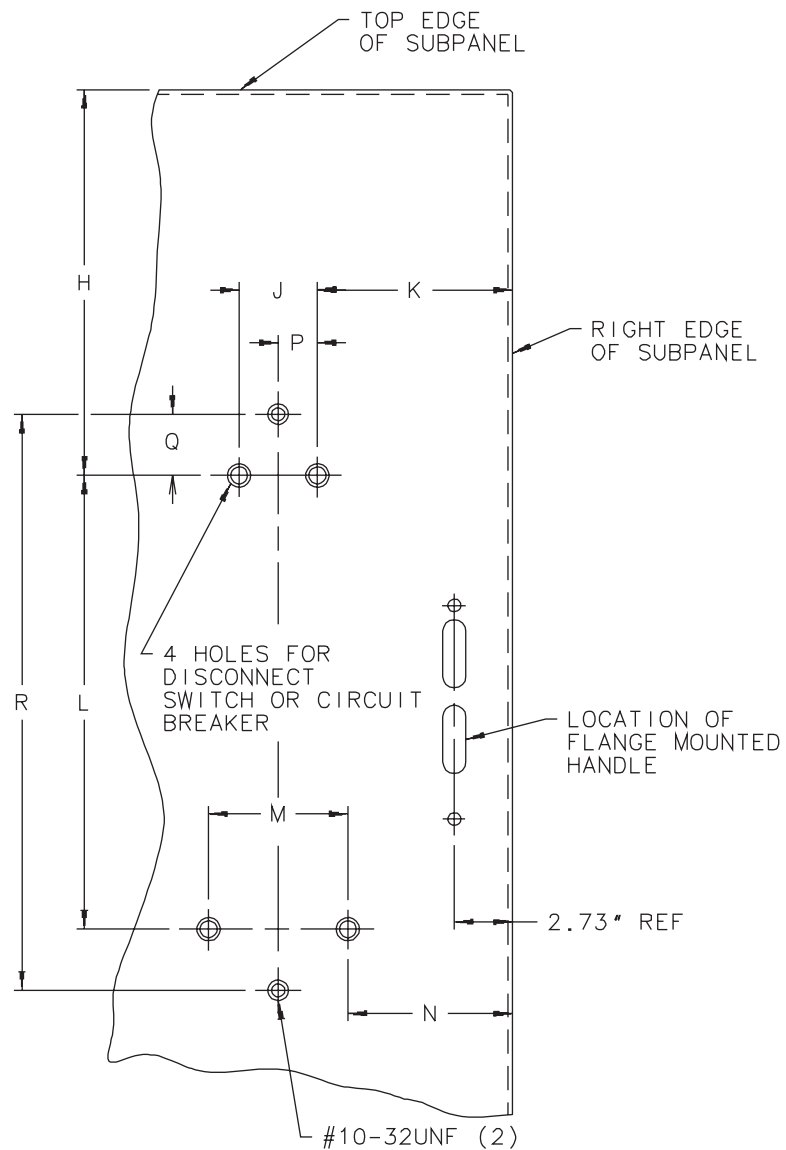


Figure 2

PROLINE® Disconnect Door
Installation Instructions for Allen–Bradley 1494V (variable depth) Disconnects

Allen–Bradley Bulletin 1494V Disconnect or Operator for Circuit Breaker	PROLINE® Enclosure Height			Table 3								
	1600	1800	2000									
	H	H	H	J	K	L	M	N	P	Q	R	Hole Size
1494V–DS30* (30AMP) 1494V–DS60* (60AMP) 1494V–DS100* (100A/SERIES B)	6.85	10.79	14.73	1.97	6.19	4.33	3.94	5.19	-----	-----	-----	.159 Ø 10–32 UNF
1494V–DS200* (200A/SERIES B)	5.72	9.66	13.60	2.36	6.57	4.92	4.72	5.44	-----	-----	-----	.201 Ø 1/4–20 UNC
1494V–M40 For 15–150 AMP WEST.	8.94	12.88	16.82	1.38	4.85	4.50	1.38	4.85	-----	-----	-----	.136 Ø 1/4–20 UNC
1494V–M50 FOR 16–150 AMP WEST.	9.50	13.44	17.38	1.38	5.02	7.25	1.38	5.02	.69	2.03	10.62	.201 Ø 1/4–20 UNC
1494V–M60 FOR 70–400 AMP WEST.	8.44	12.38	16.32	1.72	5.55	8.44	1.72	5.55	.86	1.16	10.75	.201 Ø 1/4–20 UNC

* See A–B instructions for locating fuse blocks.

NOTE: Allen–Bradley variable depth disconnects are provided with connecting rods that must be cut to length to fit the subpanel depth (from door surface to subpanel surface) that you selected in Step 7. See Allen–Bradley instructions for range of depth available for a specific disconnect. Allen–Bradley also has longer connecting rods available.

PROLINE® Disconnect Door
Installation Instructions for Cutler–Hammer C361 and C371 Disconnects
With Variable Depth Operating Mechanisms

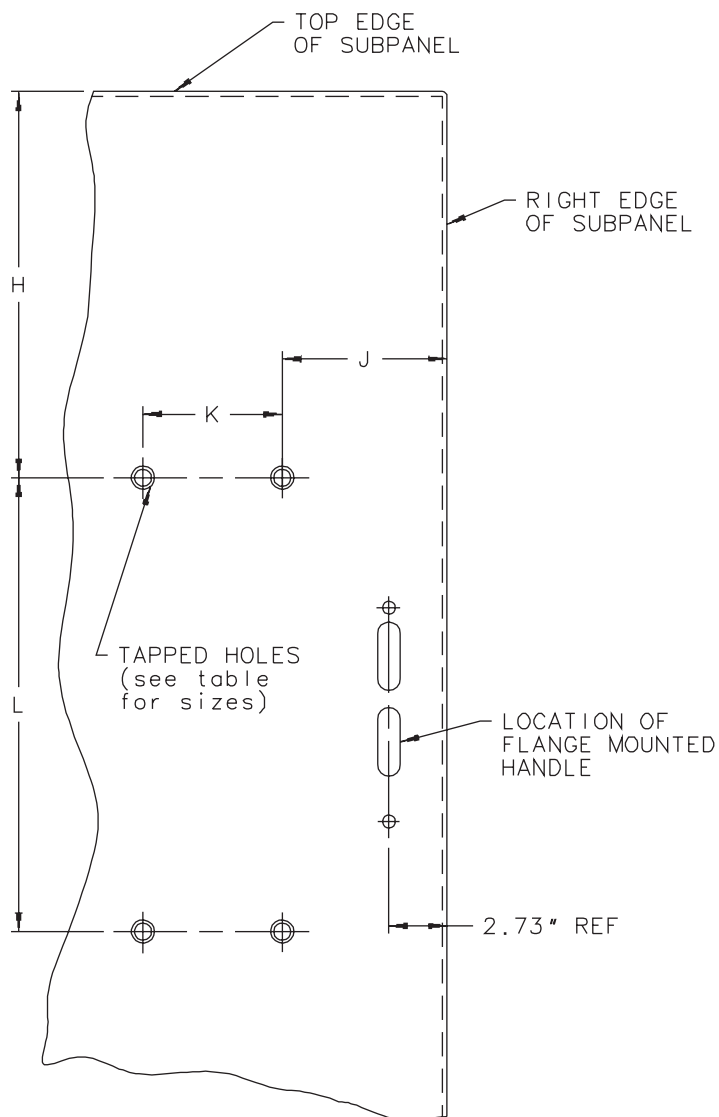


Figure 3

Hole Pattern For Disconnect Switch	Size
C361NC/C361SC	30 AMP
C361ND/C361SD	60 AMP
C361NE/C361SE	100 AMP
C361NF/C361SF	200 AMP

PROLINE® Disconnect Door
Installation Instructions for Cutler-Hammer C361 and C371 Disconnects
With Variable Depth Operating Mechanisms

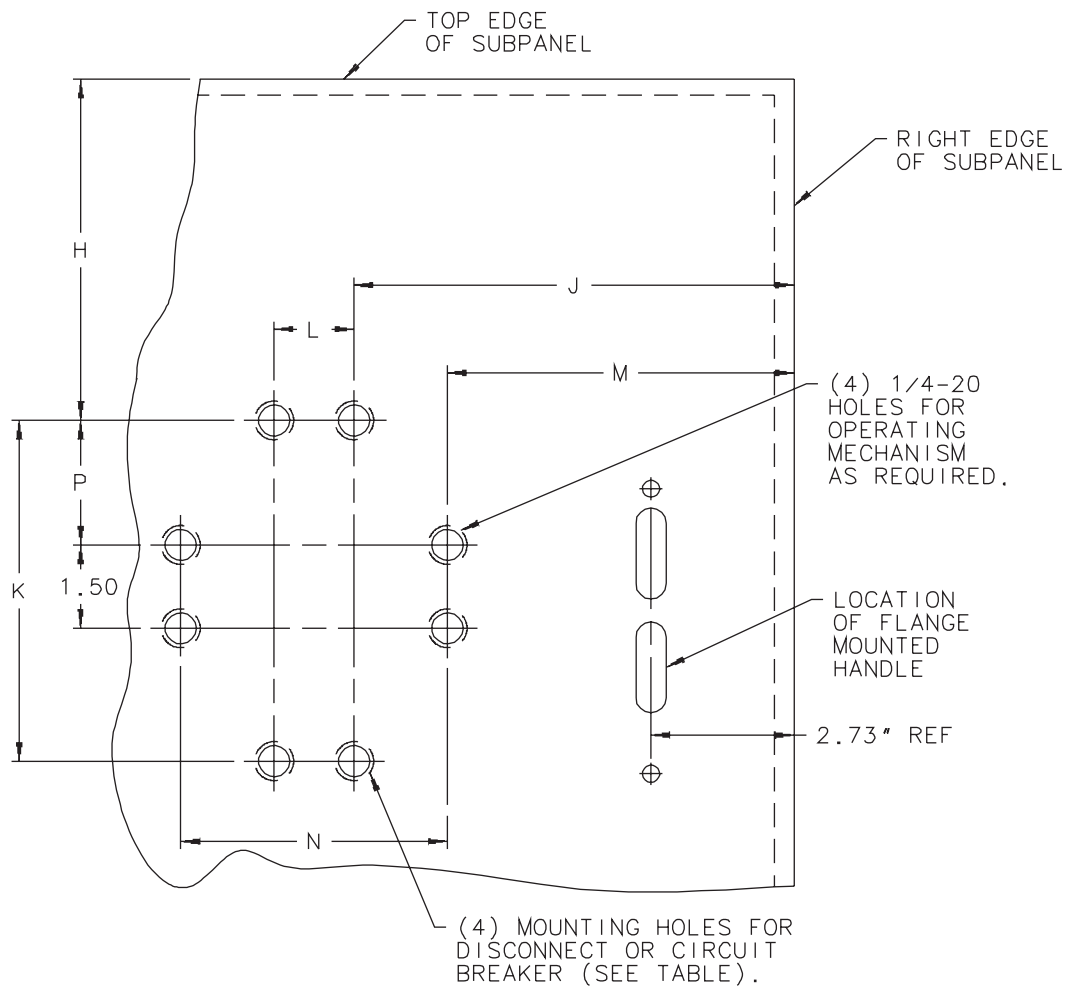


Figure 4

Hole Pattern For Circuit Breaker	Frame Size
HMCP, FS, FH, EHD FDB, FD, HFD	150 AMP
HMCP, JS, JH, JL, JD, JDB, HJD, JDC	250 AMP
HMCP, HK, KS, KD, DK, KDB, HKD	400 AMP
LH, LS, LC	600 AMP
MH, MS, MC	800 AMP
NH, NS, NC	1200 AMP

PROLINE® Disconnect Door
Installation Instructions for Cutler–Hammer C361 and C371 Disconnects
With Variable Depth Operating Mechanisms

Table 4

Circuit Breaker or Disconnect Switch	Frame Size	PROLINE® Enclosure Height			J	K	L	M	N	P	Size of Mounting Holes
		1600 H	1800 H	2000 H							
C361NC (30A)	-----	7.13	11.07	15.01	6.22	4.000	7.125	-----	-----	-----	10–32 UNF
C361SC (30A)	-----	7.13	11.07	15.01	6.22	4.000	9.750	-----	-----	-----	10–32 UNF
C361ND (60A)	-----	7.13	11.07	15.01	6.22	4.000	7.125	-----	-----	-----	10–32 UNF
C361SD (60A)	-----	7.13	11.07	15.01	6.22	4.000	9.750	-----	-----	-----	10–32 UNF
C361NE (100A)	-----	6.94	10.88	14.82	6.10	5.500	7.125	-----	-----	-----	10–32 UNF
C361SE (100A)	-----	6.94	10.88	14.82	6.10	5.500	11.875	-----	-----	-----	10–32 UNF
C361NF (200A)	-----	5.35	9.30	13.23	4.57	8.500	15.500	-----	-----	-----	5/16–18 UNC
C361SF (200A)	-----	5.35	9.30	13.23	4.57	8.500	15.500	-----	-----	-----	5/16–18 UNC
HMCP, FS, FH, EHD, FDB, FD, HFD	150A	9.36	13.30	17.24	6.38	4.500	1.375	-----	-----	-----	8–32 UNC
JS, JH, JL	250A	3.32	13.26	17.20	6.88	7.250	1.375	4.07	6.948	2.750	10–32 UNF
HMCP	250A	9.32	13.26	17.20	6.88	7.250	1.375	4.07	6.948	2.750	1/4–20 UNC
KH, KS, DK, KDB, KD, HKD, KDC	400A	8.88	12.82	16.76	6.71	8.438	1.719	4.07	6.948	3.180	1/4–20 UNC
HMCP	400A	8.88	12.82	16.76	6.71	8.438	1.719	4.07	6.948	4.000	1/4–20 UNC
LH, LS, LC	600A	7.00	10.93	14.87	7.63	9.530	2.750	4.00	10.050	4.320	1/4–20 UNC
MH, MS, MC	800A	DO NOT INSTALL	DO NOT INSTALL	11.31	7.63	14.750	2.750	4.00	10.050	7.880	1/4–20 UNC
NH, HS, HC	1200A	DO NOT INSTALL	DO NOT INSTALL	11.31	7.63	14.750	2.750	4.00	10.050	7.880	1/4–20 UNC

NOTE: Cutler–Hammer variable depth disconnects are provided with connecting rods that must be cut to length to fit the subpanel depth (from door surface to subpanel surface) that you selected in Step 7. See Cutler–Hammer instructions for range of depth available for a specific disconnect. Cutler–Hammer also has longer connecting rods available.

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APX® Disconnect System
Installation Instructions for General Electric Type STDA
Variable Depth Operating Mechanisms

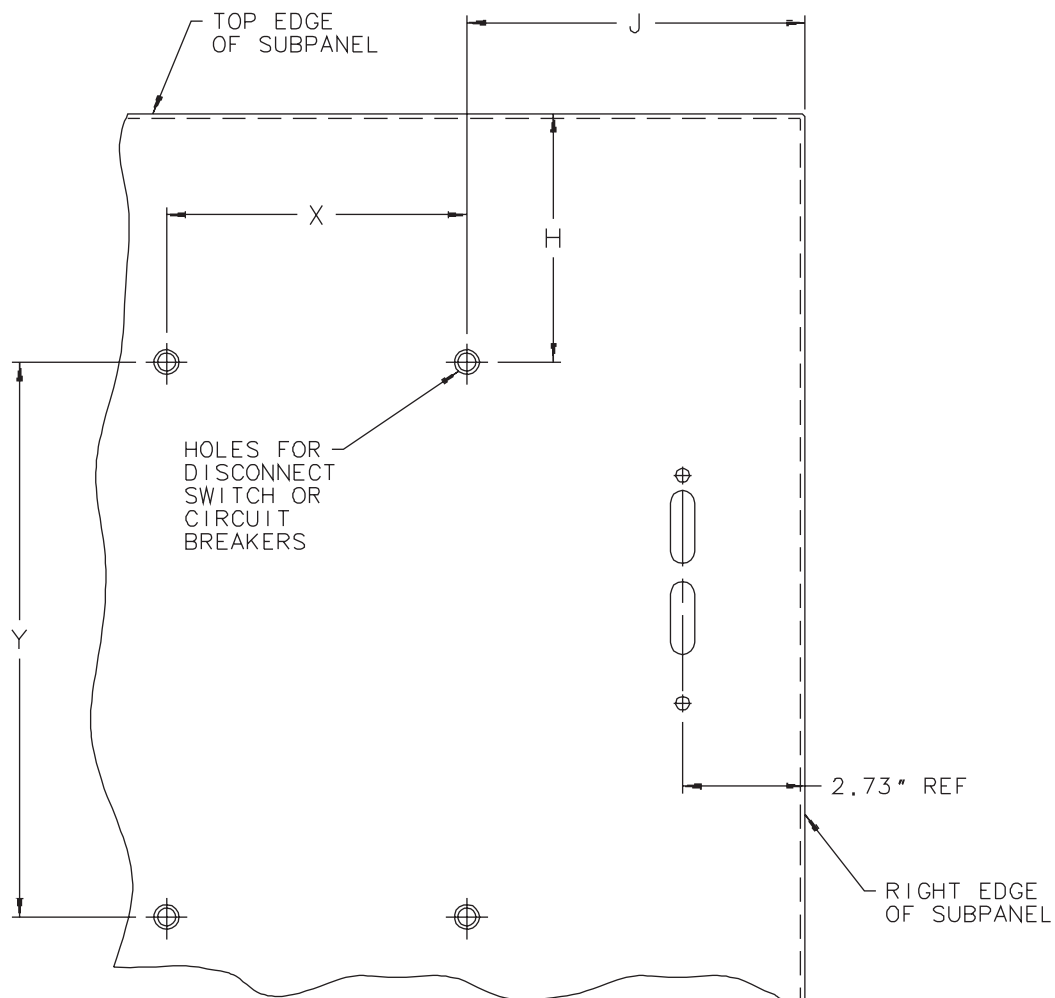


Figure 5

PROLINE® Disconnect Door
Installation Instructions for General Electric Type STDA
Variable Depth Operating Mechanisms

Table 5
Sub-panel Drilling

G.E. OPERATING MECHANISM	G.E. DISCONNECT TYPE	No. of Holes	Hole Size	PROLINE® Enclosure Height			J	X	Y
				1600 H	1800 H	2000 H			
TDOM1A	QMR-QMW	4	1/4-20	7.07	11.01	14.95	4.50	3.00	6.75
TDOM1JA	QMR-QMW	4	1/4-20	7.07	11.01	14.95	4.50	3.00	6.75
TDOM1B	QMR-QMW	4	1/4-20	7.07	11.01	14.95	4.50	3.00	6.75
TDOM1JB	QMR-QMW	4	1/4-20	7.07	11.01	14.95	4.50	3.00	6.75
TDOM2	QMR-QMW	4	1/4-20	7.07	11.01	14.95	4.44	7.00	7.25
SDOM1A	SE150	4	1/4-20	7.07	11.01	14.95	4.50	3.00	6.75
SDOM3	SF250	4	1/4-20	7.47	11.41	15.35	5.44	2.75	10.88
SDOM4	SG600	6	1/4-20	5.47	9.41	13.35	5.10	3.35	5.51 AND 12.20
SDOM1A	TEB, TED	4	1/4-20	7.07	11.01	14.95	4.50	3.00	6.75
SDOM1A & SDOM1AP	TB1 TEC, TECL	4	1/4-20	7.07	11.01	14.95	4.50	3.00	6.75
TDOM3	TFJ, TFK	4	1/4-20	7.07	11.01	14.95	4.44	2.75	10.88
TDOM4	J FRAME	4	1/4-20	6.44	10.68	14.32	5.38	5.50	8.63
TDOM5	TB4, TJH	4	1/4-20	6.44	10.68	14.32	5.38	5.50	14.63
TDOM6	K FRAME	4	1/4-20	Do Not Install	Do Not Install	10.57	5.38	5.50	16.75
TDOM7	TB6, TB8	6	1/4-20	Do Not Install	Do Not Install	10.57	5.38	5.50	16.75 AND 23.12

NOTE: General Electric variable depth disconnects are provided with connecting rods that must be cut to length to fit the subpanel depth (from door surface to subpanel surface) that you selected in Step 7. See General Electric instructions for range of depth available for a specific disconnect. General Electric also has longer connecting rods available.

PROLINE® Disconnect Door
Installation Instructions for Square D 9422
Variable Depth Operating Mechanisms

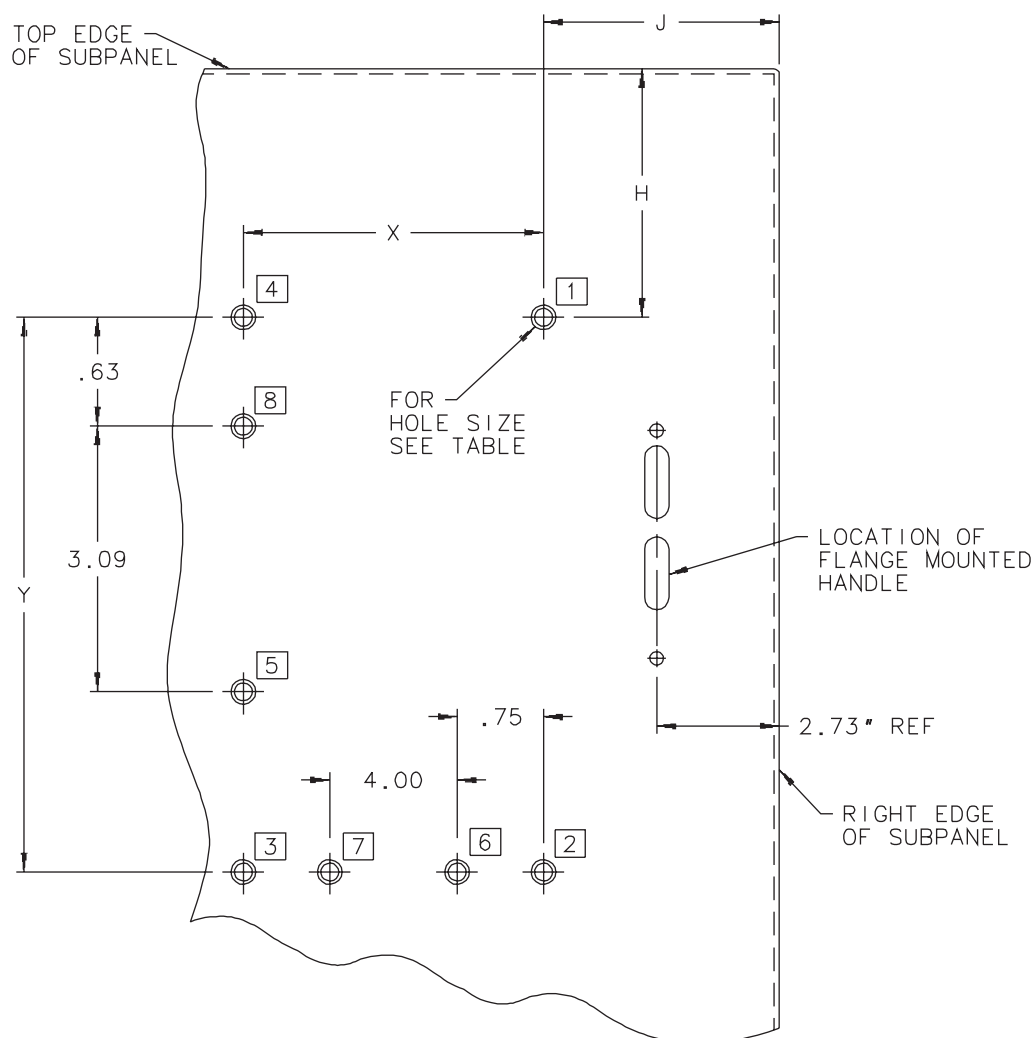


Figure 6

PROLINE® Disconnect Door
Installation Instructions for Square D 9422
Variable Depth Operating Mechanisms

Table 6
Sub-panel Drilling

CABLE MECHANISM	No. of Holes	Hole Position	Hole Size	PROLINE® Enclosure Height			J	X	Y
				1600 H	1800 H	2000 H			
TCN, TCF	4	1,4,6,7	10-24	7.69	11.63	15.56	3.13	5.50	4.50
TDN, TDF	4	1,4,6,7	10-24	7.69	11.63	15.56	3.13	5.50	4.50
TEN, TEF	4	1,4,6,7	10-24	7.69	11.63	15.56	3.13	5.50	4.50
TC	4	1,2,5,8	10-24	7.50	11.45	15.39	3.13	5.13	6.50
TD	4	1,2,4,7	10-24	7.69	11.63	15.56	4.22	5.19	5.25
TE	4	1,2,3,4	1/4-20	6.06	10.01	13.95	5.60	5.50	6.50
TF	4	1,2,3,4	5/16-18	5.44	9.38	13.32	5.06	9.44	8.00
RG1	4	1,2,3,4	8-32	7.69	11.63	15.56	5.22	1.18	3.94
RN1	4	1,2,3,4	8-32	8.22	12.16	16.10	5.13	1.50	5.13
RP1	4	1,2,3,4	10-24	8.22	12.16	16.10	5.32	1.50	7.13
RR-1	4	1,2,3,4	1/4-20	Do Not Install	11.51	15.45	3.94	6.63	6.56
	4	1,2,3,4	.375 Dia	Do Not Install	10.31	14.07	6.25	2.00	9.25
RT-1 FOR MAL, MHL	4	1,2,3,4	1/4-20	Do Not Install	9.38	13.32	3.97	9.69	10.69
	4	1,2,3,4	.500 Dia.	Do Not Install	9.38	13.32	7.31	3.00	10.69
RT-1 FOR MEL	4	1,2,3,4	1/4-20	Do Not Install	9.38	13.32	3.97	9.69	10.69
	4	1,2,3,4	.500 Dia.	Do Not Install	9.38	13.32	7.31	3.00	11.44

NOTE: Square D variable depth disconnects are provided with connecting rods that must be cut to length to fit the subpanel depth (from door surface to subpanel surface) that you selected in Step 7. See Square D instructions for range of depth available for a specific disconnect. Square D also has longer connecting rods available.

PROLINE® Disconnect Door
Installation Instructions for Cutler-Hammer C371 FLEX SHAFT™
Flexible Cable Operating Mechanisms

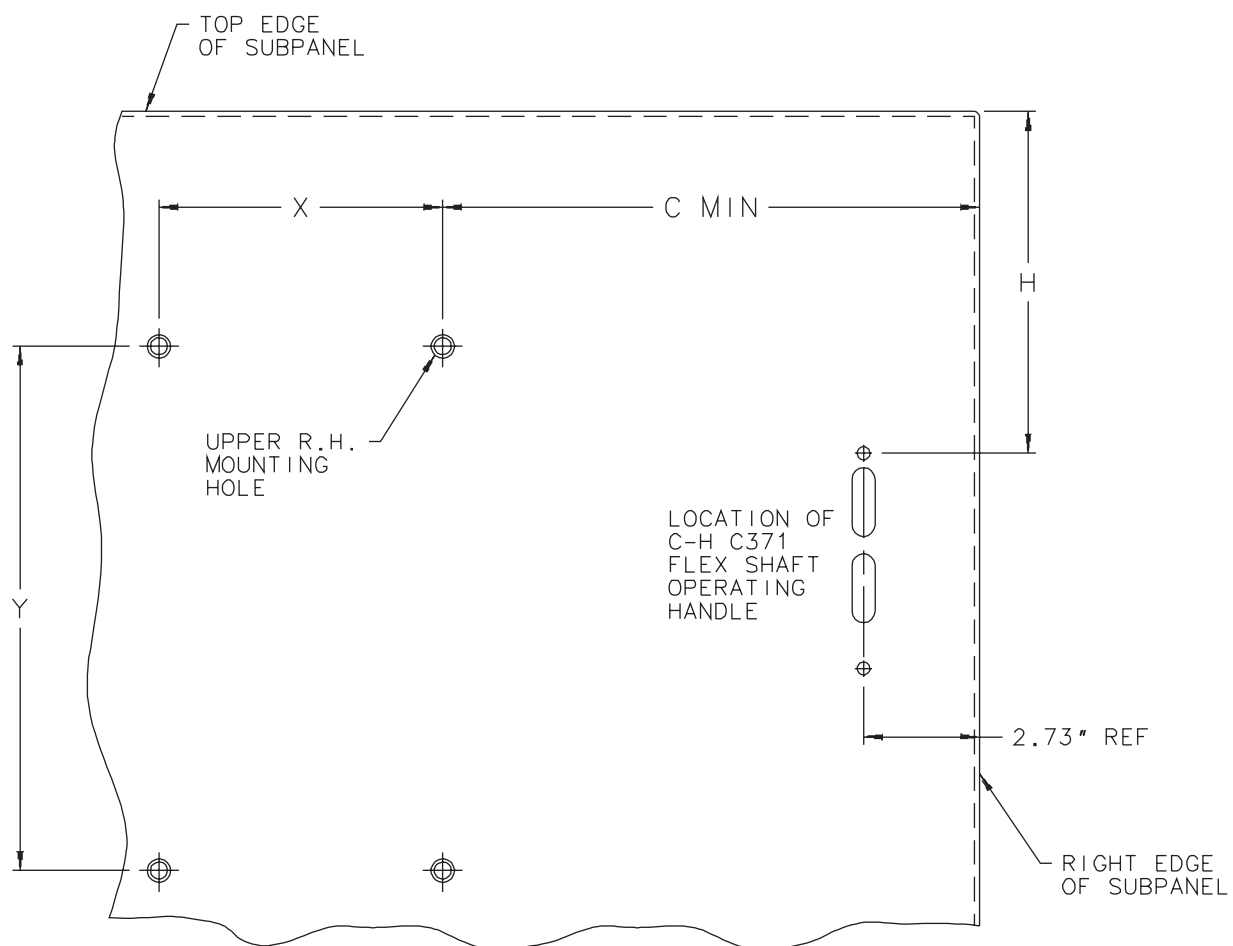


Figure 7

PROLINE® Disconnect Door
Installation Instructions for Cutler–Hammer C371 FLEX SHAFT™
Flexible Cable Operating Mechanisms

Table 7 Subpanel Drilling				
Circuit Breaker Frame Size	Hole Size	X	Y	C _{min}
F	8–32	1.375	4.500	1.38
J	1/4–20	1.375	7.250	1.38
K	1/4–20	1.719	8.438	1.88

Table 8 Location of Disconnect Operating Handle			
BULLETIN	Hoffman Disconnect Enclosure Description	Enclosure Height	H
P20	PROLINE® Disconnect Door System	1600	8.70
		1800	12.63
		2000	16.57

Step 1 – Determine disconnect hole pattern from Figure 7 and the above table. See disconnect manufacturers instructions for range of disconnect location based on cable length being used and subpanel depth selected.

NOTE: Locate disconnect so appropriate wire bend space is provided for the line side wire size being used. Refer to National Electrical code article 430–10(b) for wire bend space required.

PROLINE® Disconnect Door
Installation Instructions for General Electric SCH Disconnects
Flexible Cable Operating Mechanisms

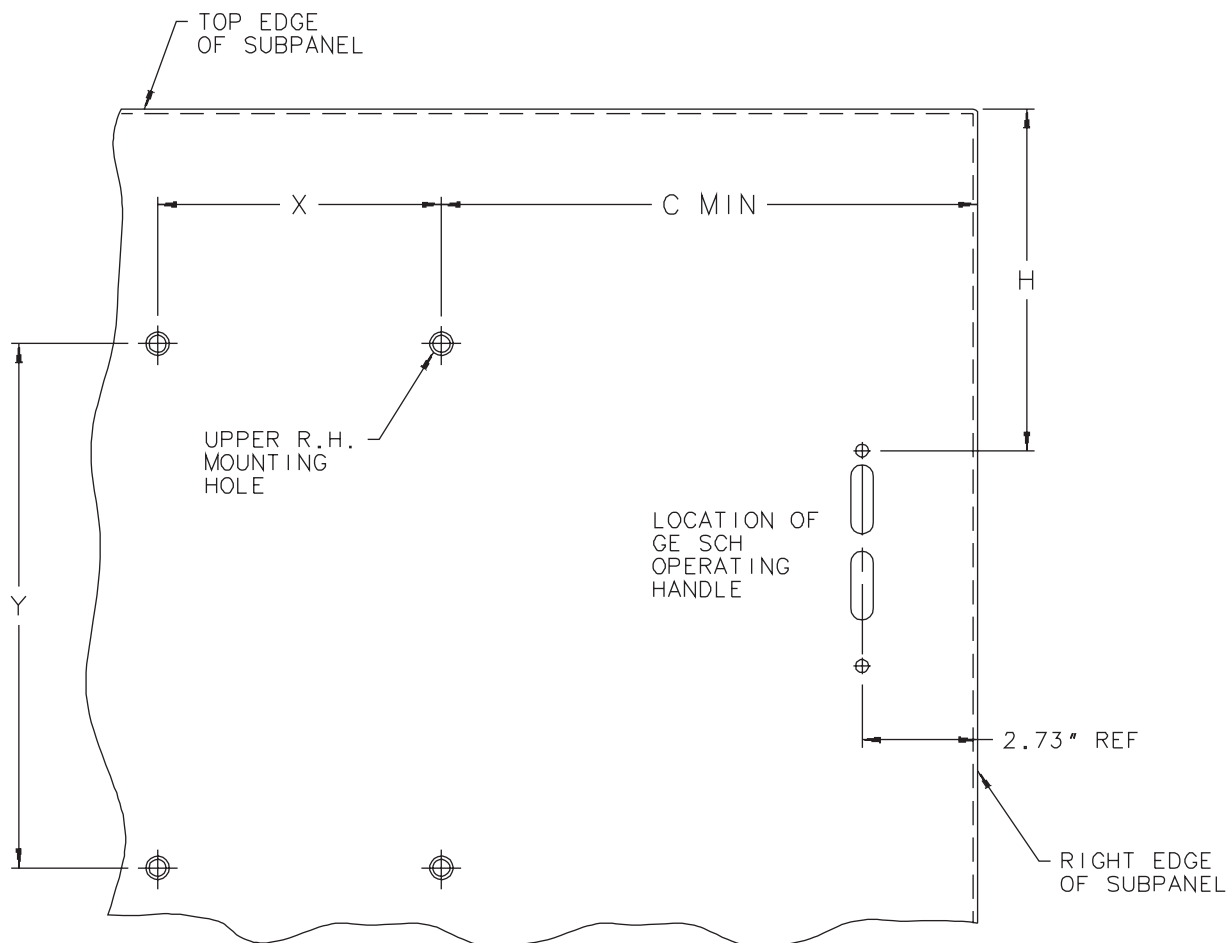


Figure 8

PROLINE® Disconnect Door
Installation Instructions for General Electric SCH
Flexible Cable Operating Mechanisms

Table 9 Sub-panel Drilling						
CABLE MECHANISM	CIRCUIT BREAKER	No. of Holes	Hole Size	X	Y	C _{min} *
SCOMIA	E150	4	8-32	1.38	4.88	1.38
SCOMIEF	SE150	4	10-32	1.38	4.88	1.38
	SF250	4	12-24	1.38	7.75	1.38
SCOMIG	SG600	4	12-24	1.81	7.75	1.84
SCOM1K	SK1200	4	5/16-18	2.75	14.25	2.75

* See General Electric instructions for range of dimensions which vary with enclosure depth and various lengths of operating cables that are available from General Electric.

Table 10 Location of Disconnect Operating Handle			
BULLETIN	Hoffman Disconnect Enclosure Description	Enclosure Height A	H
P20	PROLINE® Disconnect Door System	1600	8.70
		1800	12.63
		2000	16.57

Step 1 – Determine disconnect hole pattern from Figure 8 and the above table. See disconnect manufacturers instructions for range of disconnect location based on cable length being used and subpanel depth selected.

NOTE: Locate disconnect so appropriate wire bend space is provided for the line side wire size being used. Refer to National Electrical code article 430-10(b) for wire bend space required.

PROLINE® Disconnect Door
Installation Instructions for Siemens (I-T-E) MAX-FLEX™
Flexible Cable Operating Mechanisms

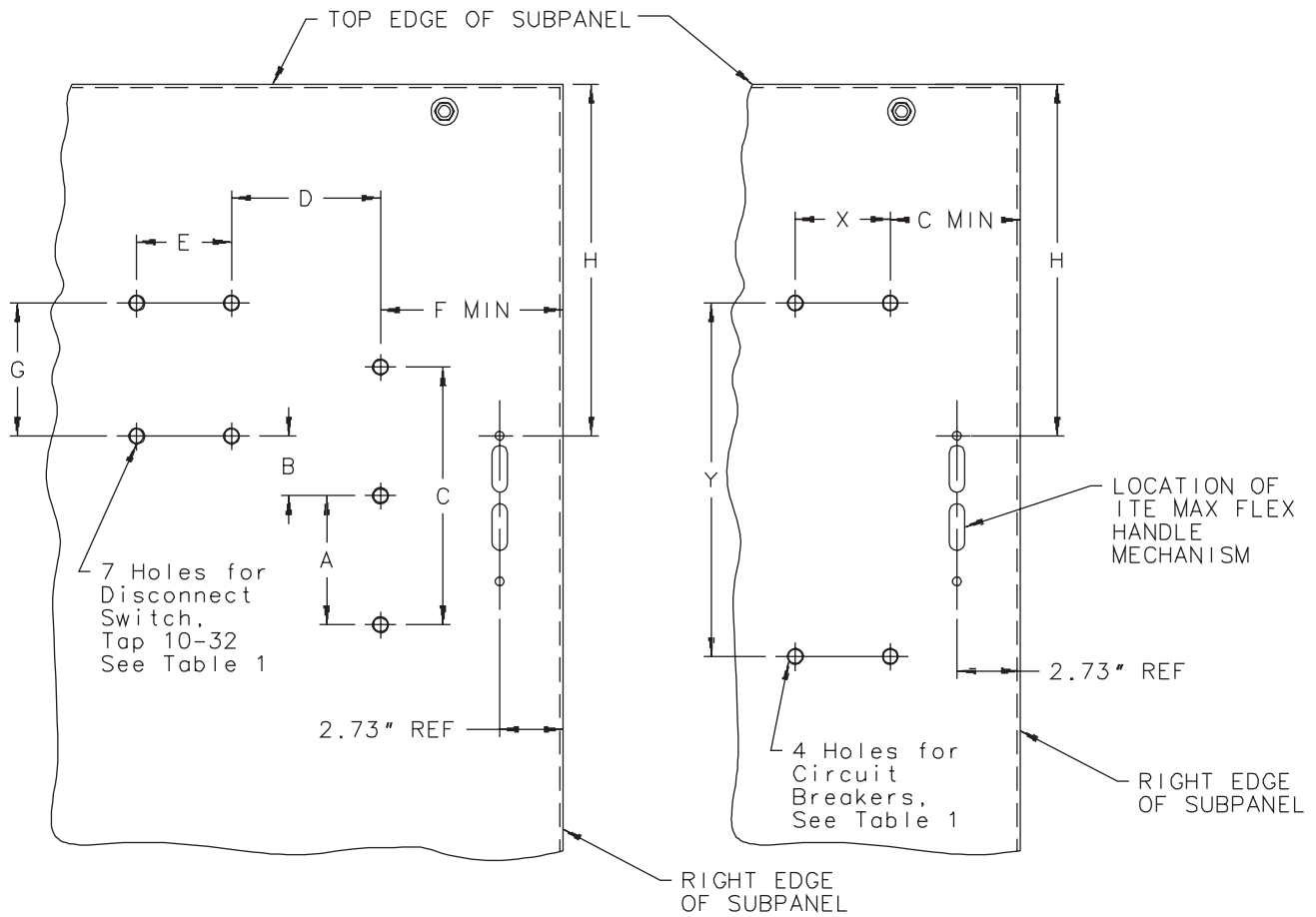


Figure 9

PROLINE® Disconnect Door
Installation Instructions for Siemens (I-T-E) MAX-FLEX™
Flexible Cable Operating Mechanisms

TABLE 1 Sub-Panel Drilling For Disconnect Switches									
I-T-E* MECHANISM	FITS DISCONNECT DEVICE	NO. OF HOLES	A	B	C	D	E	F _{MIN}	G
FHOS06036R	30 A SW.	4 & 3	2.00	1.69	5.10	2.88	1.50	.66	1.89
FHOS06036R	60 A SW.	4 & 3	2.00	1.69	5.10	2.88	1.50	.66	1.89
FHOS06036R	100 A SW.	4 & 3	2.00	.82	5.10	3.21	1.81	.66	3.00
FHOS20036R	200 A SW.	4 & 3	2.50	-1.00	5.50	1.00	7.86	.62	5.44

Table 11 Sub-Panel Drilling For Circuit Breakers					
I-T-E * MECHANISM	No. of Holes	Mtg. Hole Size	X	Y	Cmin
FHOE036	4	8-32	1.00	5.00	1.00
FHOF036	4	1/4-20	1.50	7.50	1.50
FHOJ036	4	1/4-20	2.50	9.75	2.50
FHOLM036	4	1/4-20	2.50	9.75	2.50

* These mechanisms include 36" operating cables. If longer cables are needed, order I-T-E components separately.

Table 12 Location of Disconnect Operating Handle			
BULLETIN	Hoffman Disconnect Enclosure Description	Enclosure Height	H
P20	PROLINE® Disconnect Door System	1600	8.70
		1800	12.63
		2000	16.57

Step 1 – Determine disconnect hole pattern from Figure 9 and the above table. See disconnect manufacturers instructions for range of disconnect location based on cable length being used and subpanel depth selected.

NOTE: Locate disconnect so appropriate wire bend space is provided for the line side wire size being used. Refer to National Electrical code article 430-10(b) for wire bend space required.

PROLINE® Disconnect System
Installation Instructions for Square D 9422
Flexible Cable Operating Mechanisms

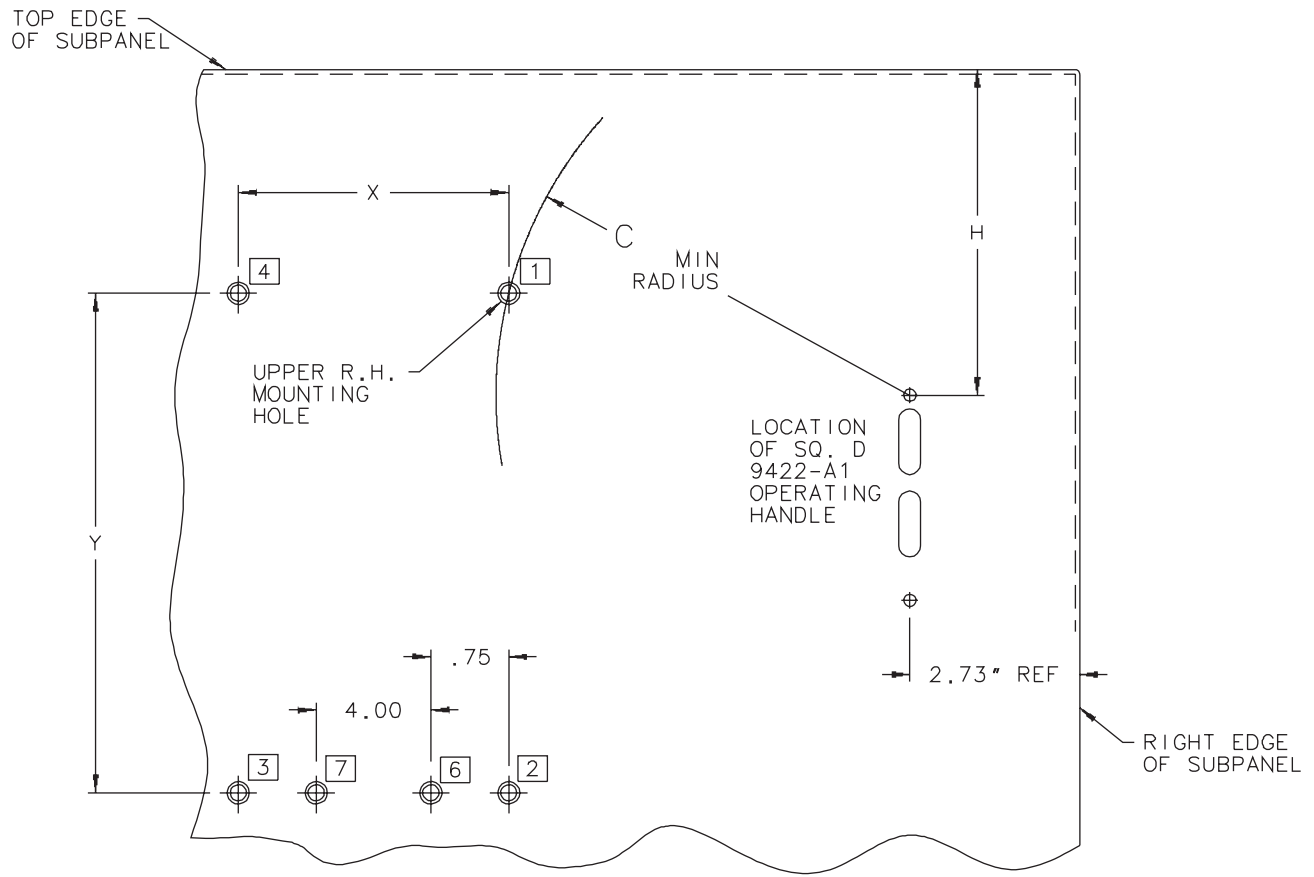


Figure 10

PROLINE® Disconnect System
Installation Instructions for Square D 9422
Flexible Cable Operating Mechanisms

Table 13 Sub-panel Drilling							
CABLE MECHANISM	CIRCUIT BREAKER	No. of Holes	Hole Position	Hole Size	X	Y	C _{min} *
CFT	TCN, TCF TDN, TDF TEN, TEF	4	1,4,6,7	10-24	5.50	4.50	1.00
		4	1,4,6,7	10-24	5.50	4.50	1.00
		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**	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	----

* See Square "D" instructions for range of "C" dimension which vary for 36", 60", and 120" cable lengths.

** See Square "D" instructions for relationship between 1/4-20 and .375 diameter holes for LA circuit breaker.

Table 14 Location of Disconnect Operating Handle			
BULLETIN	Hoffman Disconnect Enclosure Description	Enclosure Height	H
P20	PROLINE® Disconnect Door System	1600	8.70
		1800	12.63
		2000	16.57

Step 1 – Determine disconnect hole pattern from Figure 10 and the above tables. See disconnect manufacturers instructions for range of disconnect location based on cable length being used and subpanel depth selected.

NOTE – Locate disconnect so appropriate wire bend space is provided for the line side wire size being used. Refer to National Electrical Code Article 430-10b for wire bend space required.

