U1000 NEMA TYPE1 ENCLOSURE EXTERNAL HEATSINK ATTACHMENT INSTALLATION MANUAL

☐Prior to use
This manual is designed to ensure correct and suitable application of U1000-Series drives. Read this manual and the safety precautions before attempting to install, operate, maintain, or inspect and keep in a safe, convenient location for future reference. Be sure that you understand all precautions and safety information before attempting application.

☐Precautions
IMPORTANT: Use a sealant or a gasket between the enclosure panel and the external heatsink attachment in environments with a significant amount of dust or other airborne debris. Use a CR or EPDM sponge rubber with a thickness of 2 mm for gaskets.Refer to pages 8 and 9 for details.
Gasket: INOAC CORPORATION C-4205 or equivalent
Sealant: ShinEtsu Silicones KE-3494 or equivalent.

IMPORTANT: Tighten screws to the specified tightening torque. Failure to comply could result in damage to the drive from dust or other foreign material.

IMPORTANT: Follow the instructions in this manual when installing the external heatsink attachment. Be sure to install the attachment correctly. Failure to comply could result in damage to the drive from dust or other foreign material.

IMPORTANT: A panel-cutout and closing plate may be required for easier cooling fan replacement for some models. Use a sealant or a gasket between the enclosure panel and the external heatsink attachment in environments with a significant amount of dust or other airborne debris.Use a CR or EPDM sponge rubber with a thicknessof 2 mm for gaskets. Refer to pages 8 and 9 for details.
Gasket: INOAC CORPORATION C-4205 or equivalent
Sealant: ShinEtsu Silicones KE-3494 or equivalent

IP00 EXTERNAL HEATSINK ATTACHMENT CODE LIST

Model CIMR-U☐	Kit Part #	Parts List		Screw (Qty)
		External Heatsink Attachment	Bottom Cover	
2*0028A 4*0011A 4*0014A 4*0021A 4*0027A 4*0034A	UUX001072	USP03260-1	-	M6 x 12 Captive Pan Head Screw (Qty 2) (USC00075-3)
2*0042A 2*0054A 2*0068A 2*0081A 4*0040A 4*0052A 4*0065A 4*0077A	UUX001073	USP03261-1	USP03283-1	M5 X 12 Captive Pan Head Screw (Qty 4) (USC00074-3) M4 X 10 Captive Pan Head Screw (Qty 2) (USC00073-3)
2*0104A 2*0130A 4*0096A 4*0124A	UUX001074	USP03261-1	-	M5 X 12 Captive Pan Head Screw (Qty 4) (USC00074-3)
2*0154A 2*0192A 4*0156A 4*0180A	UUX001075	USP03259-1	-	-
2*0248A 4*0216A 4*0240A	-	-	-	-
4*0302A 4*0361A 4*0414A	-	-	-	-

☐:A to Z
*:A to Z

Dwg.No. UDA01009<1>-1/12

Rev	Description	Date	Drawn by:	ECO
<1>	Corrected dimensions on pg 2; Redrawn	5/12/2015	A.Slimak	6239

This document shows the drive and panel-cutout dimensions and the installation procedure for an external heatsink installation in a NEMA TYPE1 enclosure.

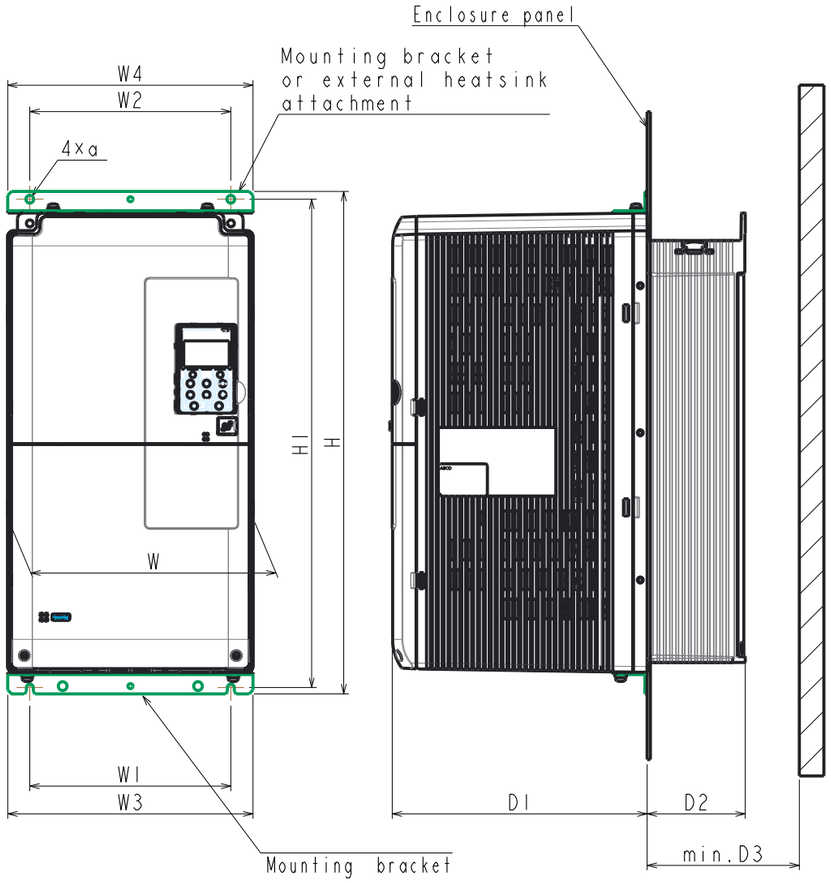
Models

CIMR-U□2*0028A~0248A

CIMR-U□4*0011A~0414A

CIMR-U□2*0028A

Dimensions of drive with external heatsink attachment (example: CIMR-U□2*0028A)



Model CIMR-U□	mm (in) Dimensions										Screw Size
	W	W1	H	W2	W3	W4	H1	D1	D2	D3	a
2*0028A 4*0011A 4*0014A 4*0021A 4*0027A 4*0034A	250 (9.84)	205 (8.07)	512 (20.16)	205 (8.07)	250 (9.84)	250 (9.84)	497.5 (19.59)	260 (10.24)	100 (3.94)	120 (4.72)	M6
2*0042A 2*0054A 2*0068A 2*0081A 4*0040A 4*0052A 4*0065A 4*0077A	264 (10.39)	218 (8.58) <1>	691.5 (27.22)	218 (8.58)	250 (9.84)	264 (10.39)	667.5 (26.28)	305 (12.01)	115.5 (4.55)	130 (5.12)	M8
2*0104A 2*0130A 4*0096A 4*0124A	264 (10.39)	218 (8.58)	857.5 (33.76)	218 (8.58)	250 (9.84)	264 (10.39)	833.5 (32.81)	326 (12.83)	124.5 (4.90)	140 (5.51)	M8
2*0154A 2*0192A 4*0156A 4*0180A	415 (16.34)	250 (9.84)	1052 (41.42)	250 (9.84)	415 (16.34)	415 (16.34)	1030 (40.55)	238 (9.37)	165 (6.50)	180 (7.09)	M10
2*0248A 4*0216A 4*0240A	490 (19.29)	360 (14.17)	1191 (46.89)	360 (14.17)	470 (18.50)	470 (18.50)	1162.5 (45.77)	269 (10.59)	181 (7.13)	200 (7.87)	M12
4*0302A 4*0361A 4*0414A	695 (27.36)	560 (22.05)	1211 (47.68)	560 (22.05)	680 (26.77)	680 (26.77)	1181 (46.50)	269 (10.59)	181 (7.13)	200 (7.87)	M12

□:A to Z

*:A to Z

ATTACHMENT INSTALLATION

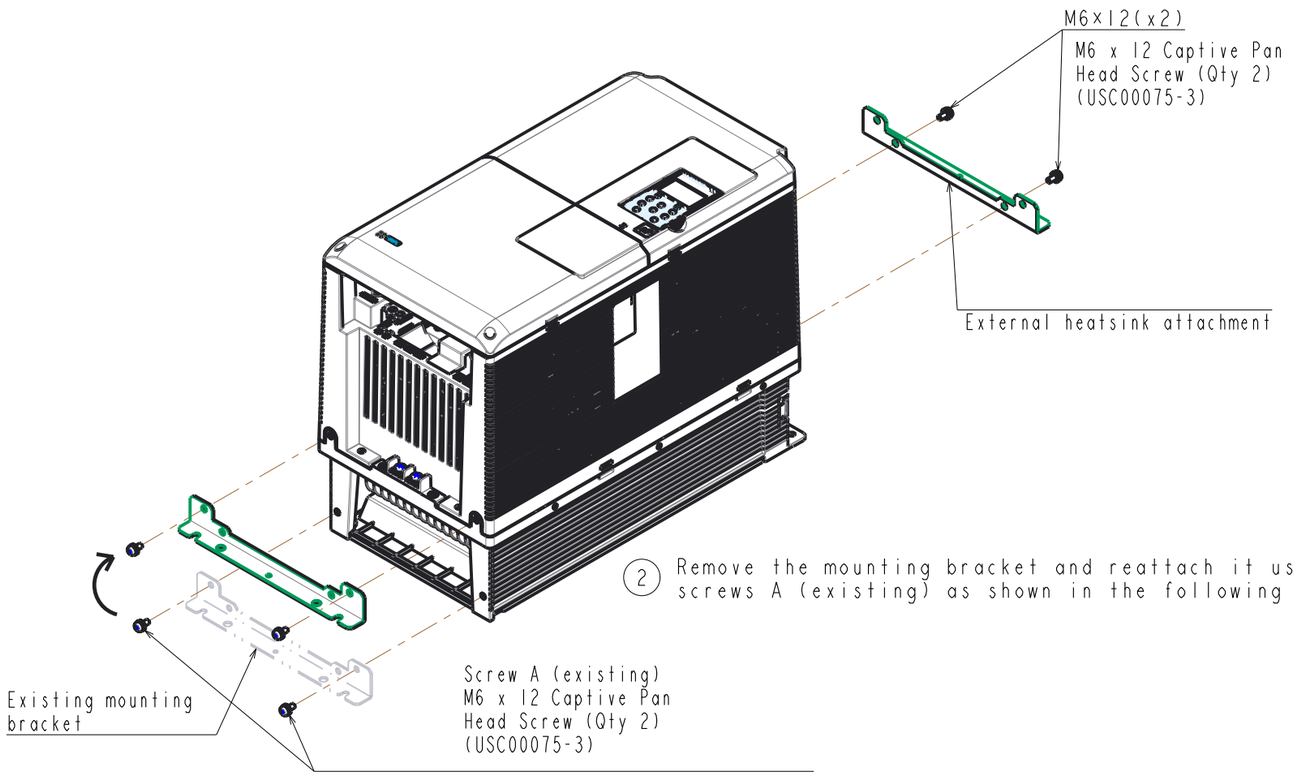
The procedure applies to the following models.

Model	External Heatsink Attachment		Mounting bracket	
	Screw (Qty)	Tightening Torque	Screw (Qty)	Tightening Torque
CIMR-U□2*0028A 4*0011A~0034A	M6 x 12 Captive Pan Head Screw (Qty 2) (USC00075-3)	4.0~4.9[N*m] (35.4~43.3[lb*in])	M6 x 12 Captive Pan Head Screw (Qty 2) (USC00075-3)	4.0~4.9[N*m] (35.4~43.3[lb*in])

□:A to Z
*:A to Z

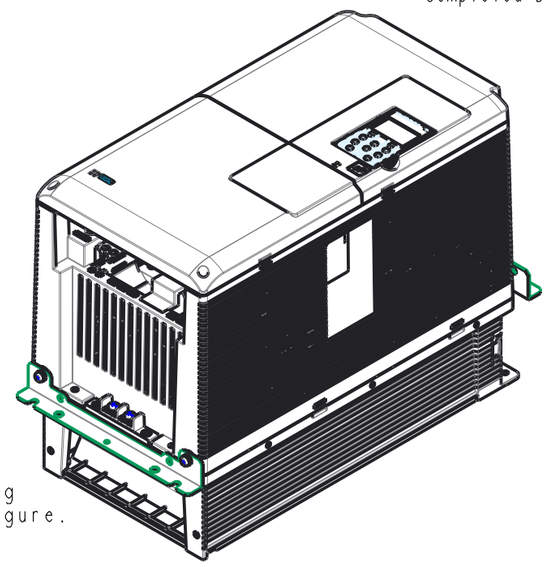
CIMR-U□2*0028A)
(example: CIMR-U□2*0028A)

① Install the external heatsink attachment on the top of the drive with screws included in the package.



② Remove the mounting bracket and reattach it using screws A (existing) as shown in the following figure.

Completed Drawing



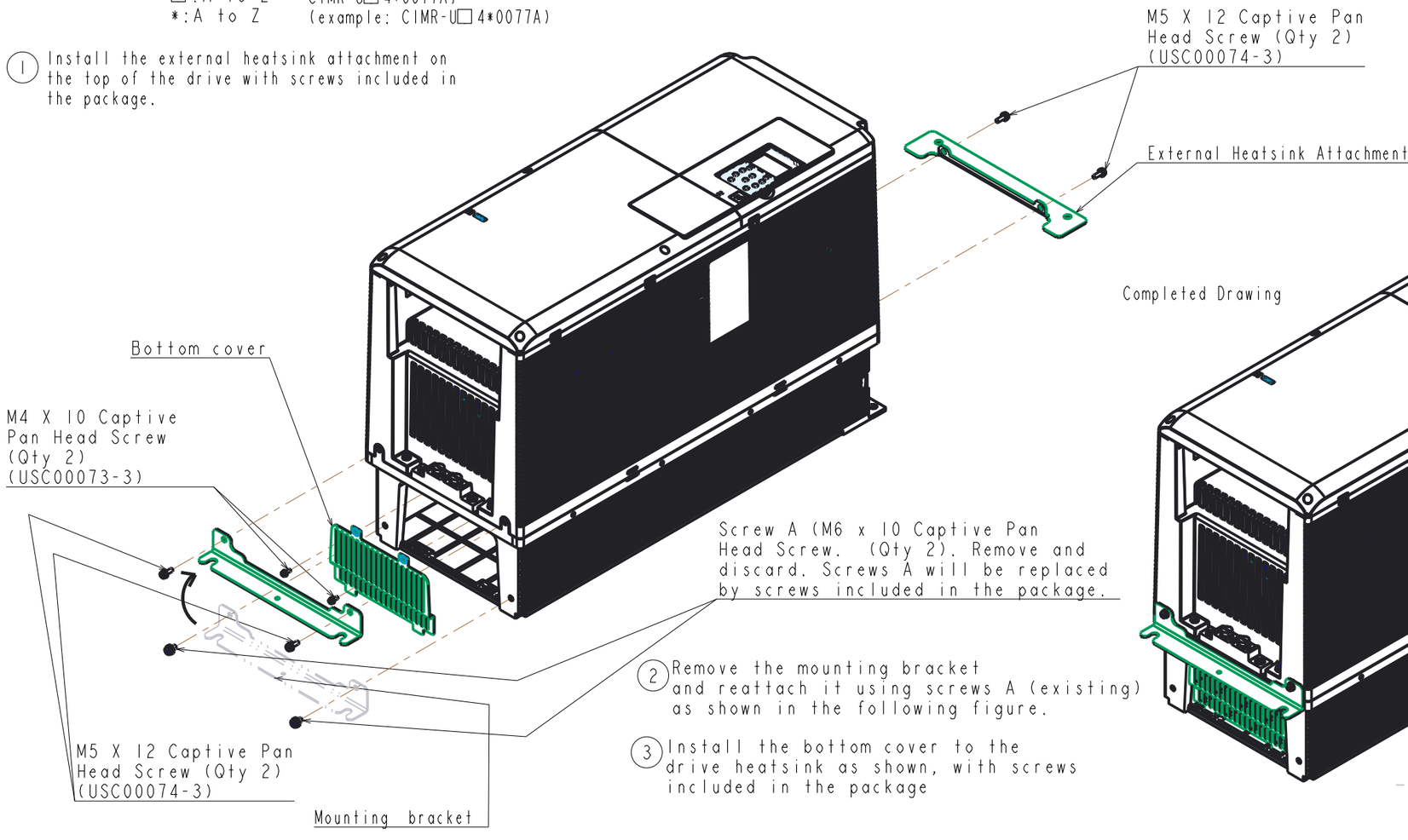
ATTACHMENT INSTALLATION

The procedure applies to the following models.

Model	External Heatsink Attachment		Mounting bracket	
	Screw (Qty)	Tightening Torque	Screw (Qty)	Tightening Torque
CIMR-U□2*0042A~0081A 4*0040A~0077A	M5 X 12 Captive Pan Head Screw (Qty 2) (USC00074-3)	2.0~2.5[N*m] (17.7~22.1[lb*in])	M5 X 12 Captive Pan Head Screw (Qty 2) (USC00074-3)	2.0~2.5[N*m] (17.7~22.1[lb*in])
	Bottom cover			
	Screw (Qty)	Tightening Torque		
	M4 X 10 Captive Pan Head Screw (Qty 2) (USC00073-3)	1.0~1.3[N*m] (8.8~11.5(1[lb*in])		

□:A to Z CIMR-U□4*0077A)
*:A to Z (example: CIMR-U□4*0077A)

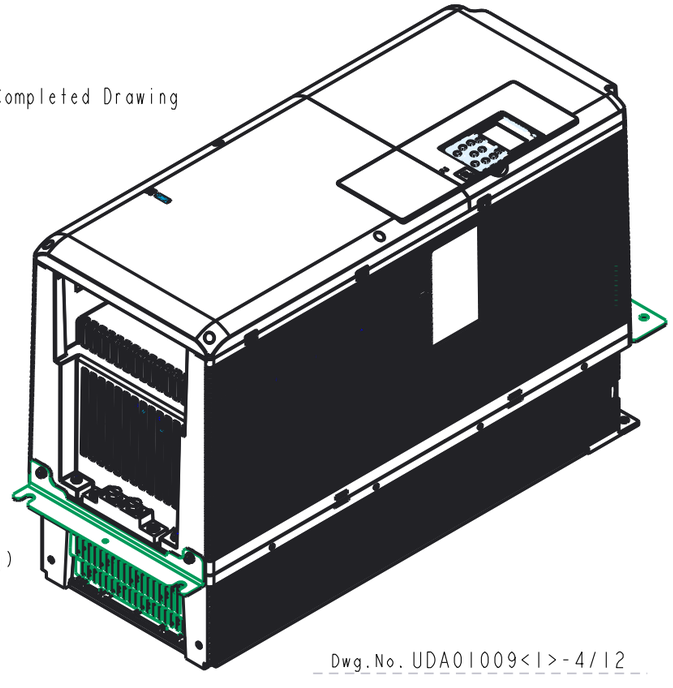
(1) Install the external heatsink attachment on the top of the drive with screws included in the package.



(2) Remove the mounting bracket and reattach it using screws A (existing) as shown in the following figure.

(3) Install the bottom cover to the drive heatsink as shown, with screws included in the package

Completed Drawing



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ATTACHMENT INSTALLATION

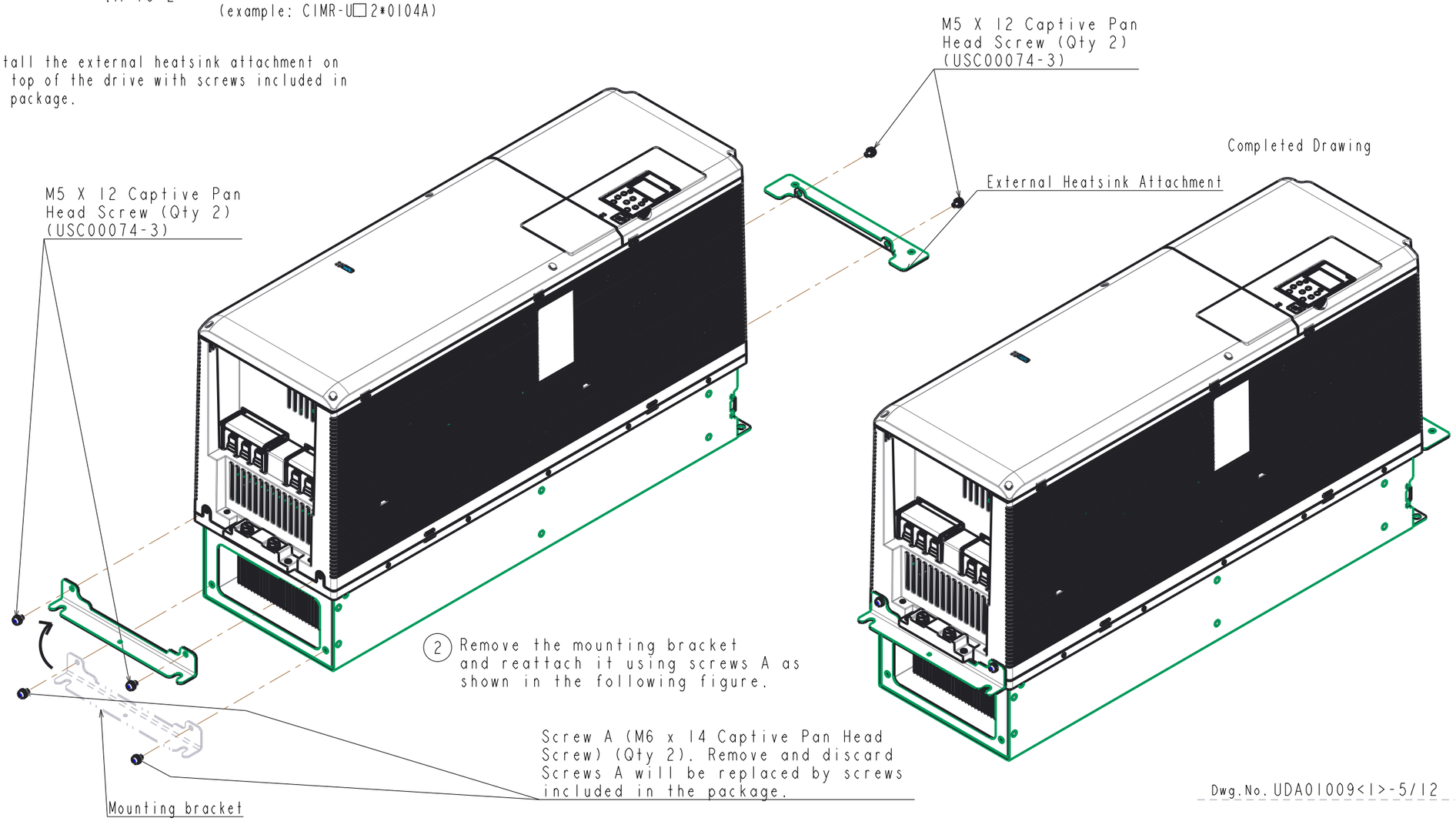
The procedure applies to the following models.

Model	External Heatsink Attachment		Mounting bracket	
	Screw (Qty)	Tightening Torque	Screw (Qty)	Tightening Torque
CIMR-U□2*0104A~0130A 4*0096A~0124A	M5 X 12 Captive Pan Head Screw (Qty 2) (USC00074-3)	2.0~2.5[N*m] (17.7~22.1[lb*in])	M5 X 12 Captive Pan Head Screw (Qty 2) (USC00074-3)	2.0~2.5[N*m] (17.7~22.1[lb*in])

□:A to Z
*:A to Z

□CIMR-U□2*0104A
(example: CIMR-U□2*0104A)

(1) Install the external heatsink attachment on the top of the drive with screws included in the package.



ATTACHMENT INSTALLATION

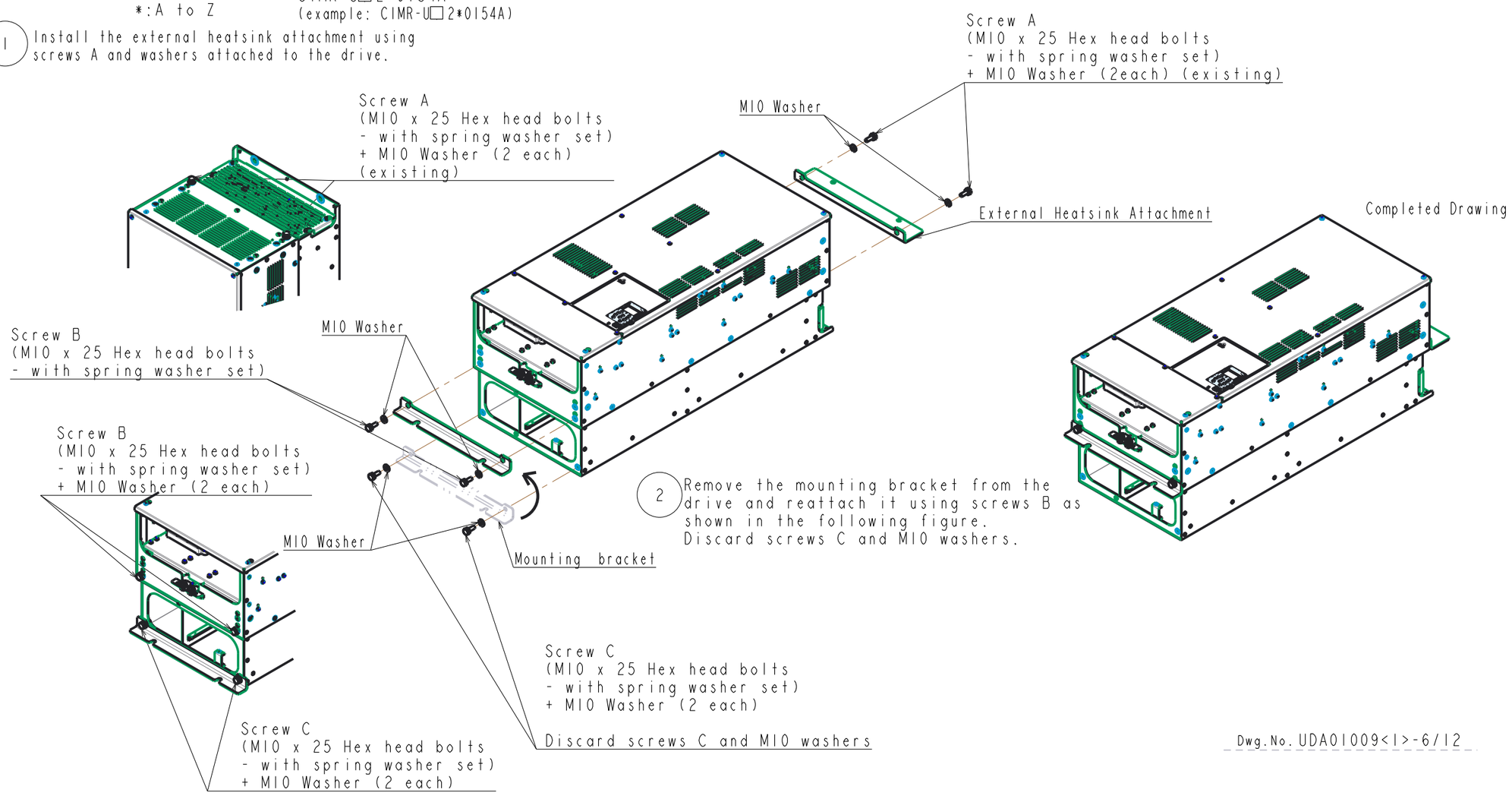
The procedure applies to the following models.

Model	External Heatsink Attachment		Mounting bracket	
	Screw (Qty)	Tightening Torque	Screw (Qty)	Tightening Torque
CIMR-U□2*0154A~0192A 4*0156A~0180A	M10x25 Hex head bolts - with spring washer set (2) M10 Washer (2) (existing)	17.7~22.6[N*m] (156.6~200[lb*in])	M10x25 Hex head bolts - with spring washer set (2) M10 Washer (2) (exsisting)	17.7~22.6[N*m] (156.6~200[lb*in])

□:A to Z
*:A to Z

CIMR-U□2*0154A
(example: CIMR-U□2*0154A)

1 Install the external heatsink attachment using screws A and washers attached to the drive.



2 Remove the mounting bracket from the drive and reattach it using screws B as shown in the following figure.
Discard screws C and M10 washers.

ATTACHMENT INSTALLATION

The procedure applies to the following models.

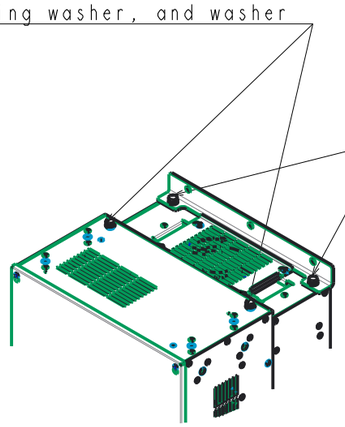
CIMR-U□2*0248A □:A to Z
example: CIMR-U□2*0248A *:A to Z

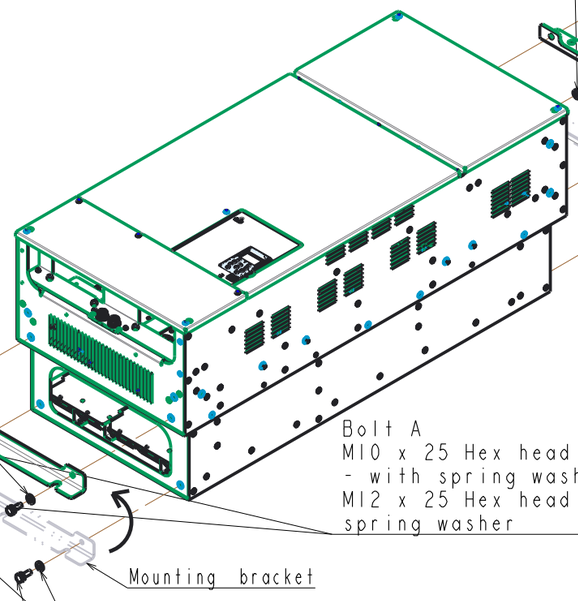
Model	Mounting bracket	
	Screw (Qty)	Tightening Torque
CIMR-U□2*0248A 4*0216A~0240A	M10x25 Hex head bolts - with spring washer set (4) M10 Washer (4)	17.7~22.6[N*m] (156.6~200[lb*in])
CIMR-U□4*0302A~0414A	M12x25 Hex head bolts (4) M12 Spring Washer (4) M12 Washer (4)	31.4~39.2[N*m] (277.9~346.9[lb*in])

(1) Remove the mounting bracket from the drive and reattach it using screws A as shown in the following figure.Screws B will be replaced by screws A.

Bolt A
M10 x 25 Hex head bolts
- with washer set
M12 x 25 Hex head bolts,
spring washer, and washer

Bolt B
M10 x 25 Hex head bolts
- with washer set
M12 x 25 Hex head bolts,
spring washer, and washer





M10 Washer

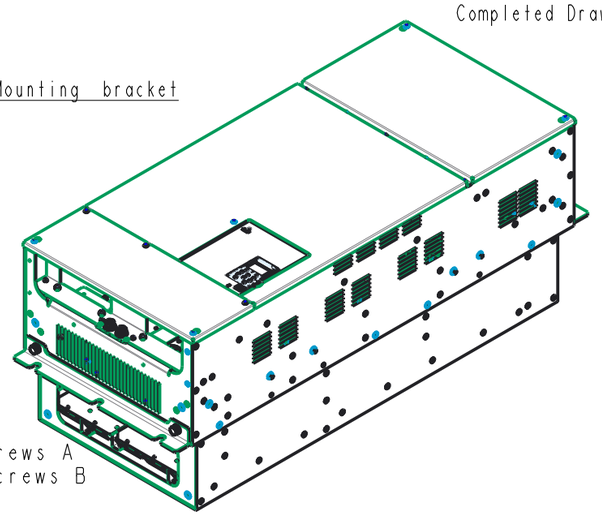
M10 Washer

Bolt A
M10 x 25 Hex head bolts
- with spring washer set
M12 x 25 Hex head bolts,
spring washer

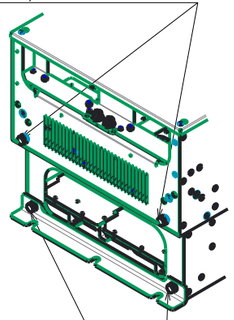
Bolt B
M10 x 25 Hex head bolts
- with spring washer set
M12 x 25 Hex head bolts,
spring washer
Discard bolts B.

Mounting bracket

Completed Drawing



Bolt A
M10 x 25 Hex head bolts
with washer set
M12 x 25 Hex head bolts,
spring washer, and washer



M10 Washer

Bolt A
M10 x 25 Hex head bolts
- with spring washer set
M12 x 25 Hex head bolts,
spring washer

Mounting bracket

M10 Washer

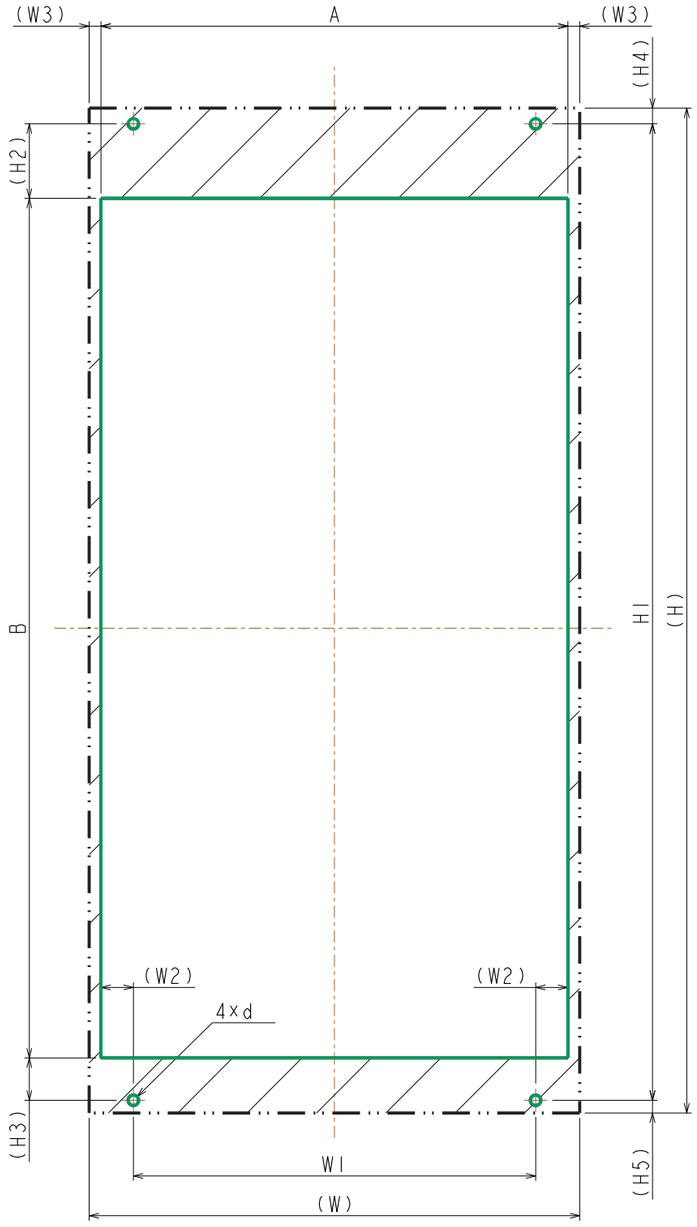
(2) Remove the mounting bracket from the drive and reattach it using screws A as shown in the following figure.Screws B will be replaced by screws A.

Bolt B
M10 x 25 Hex head bolts
- with washer set
M12 x 25 Hex head bolts,
spring washer, and washer

Bolt B
M10 x 25 Hex head bolts
- with spring washer set
M12 x 25 Hex head bolts,
spring washer
Discard bolts B.

PANEL CUTOUT:

Fig.1



The optional gasket dimensions are shown in the parentheses and the shaded area.

Model CIMR-U□	mm,(in) Dimensions												Screw Size	Fig.
	(W)	(H)	W1	(W2)	(W3)	H1	(H2)	(H3)	(H4)	(H5)	A	B	d	
2*0028A 4*0011A 4*0014A 4*0021A 4*0027A 4*0034A	250 (9.84)	512 (20.16)	205 (8.07)	16.5 (0.65)	6 (0.24)	497.5 (19.59)	38 (1.5)	21.5 (0.85)	8 (0.31)	6.5 (0.26)	238 (9.37)	438 (17.24)	M6	Fig.1
2*0042A 2*0054A 2*0068A 2*0081A 4*0040A 4*0052A 4*0065A 4*0077A	264 (10.39)	27.22 (691.5)	218 (8.58)	17 (0.67)	6 (0.24)	667.5 (26.28)	15 (0.59)	24.5 (0.96)	12.5 (0.49)	11.5 (0.45)	252 (9.92)	628 (24.72)	M8	

□:A to Z
*:A to Z

PANEL CUTOUT

The optional gasket dimensions are shown in the parentheses and the shaded area.

Model CIMR-U□	mm, (in) Dimensions																						Screw Size		Fig.
	W	(H)	W1	(W2)	(W3)	(W4)	W5	(W6)	(W7)	H1	(H2)	(H3)	(H4)	(H5)	(H6)	H7	(H8)	(H9)	A	B	C	D	E	d1	d2	
2*0104A 2*0130A 4*0096A 4*0124A	264 (10.39)	857.5 (33.76)	218 (8.58)	17 (0.67)	6 (0.24)	300 (11.81)	280 (11.02)	6 (0.24)	16 (0.63)	833.5 (32.81)	15 (0.59)	24.5 (0.96)	12.5 (0.49)	11.5 (0.45)	230 (9.06)	212 (8.35)	6 (0.24)	9 (0.35)	252 (9.92)	794 (31.26)	268 (10.55)	200 (7.78)	50 (1.97)	M8	M5	Fig.2a Fig.2b
2*0154A 2*0192A 4*0156A 4*0180A	415 (16.34)	1052 (41.42)	250 (9.84)	73.5 (2.89)	9 (0.35)	515 (20.28)	492 (19.37)	6 (0.24)	17.5 (0.69)	1030 (40.55)	37 (1.46)	30 (1.18)	11 (0.43)	11 (0.43)	230 (9.06)	212 (8.35)	6 (0.24)	9 (0.35)	397 (15.63)	963 (37.91)	480 (18.90)	200 (7.87)	74.5 (2.93)	M10	M5	Fig.3a Fig.3b
2*0248A 4*0216A 4*0240A	490 (19.29)	1191 (46.89)	360 (14.17)	51.5 (2.03)	13.5 (0.53)	515 (20.28)	492 (19.37)	6 (0.24)	17.5 (0.69)	1162.5 (45.77)	52.5 (2.07)	49 (1.93)	14 (0.55)	14.5 (0.57)	230 (9.06)	212 (8.35)	6 (0.24)	9 (0.35)	463 (18.23)	1061 (41.77)	480 (18.90)	200 (7.87)	85 (3.35)	M12	M5	Fig.4a Fig.4b
4*0302A 4*0361A 4*0414A	695 (27.36)	1211 (47.68)	560 (22.05)	54 (2.13)	13.5 (0.53)	725 (28.54)	708 (27.87)	6 (0.24)	14.5 (0.57)	1181 (46.50)	61 (2.40)	59 (2.32)	15.5 (0.61)	14.5 (0.57)	230 (9.06)	212 (8.35)	6 (0.24)	9 (0.35)	668 (26.30)	1061 (41.77)	696 (27.40)	200 (7.87)	104 (4.09)	M12	M5	Fig.5a Fig.5b

□ : A to Z
* : A to Z

Fig.2a

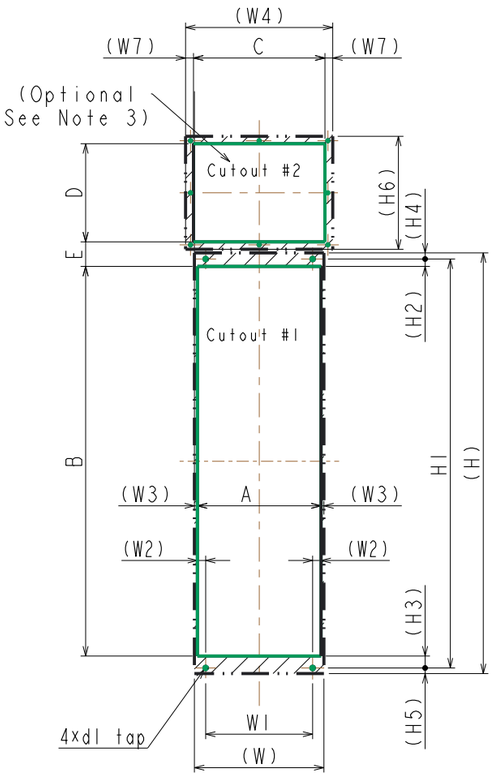


Fig.2b

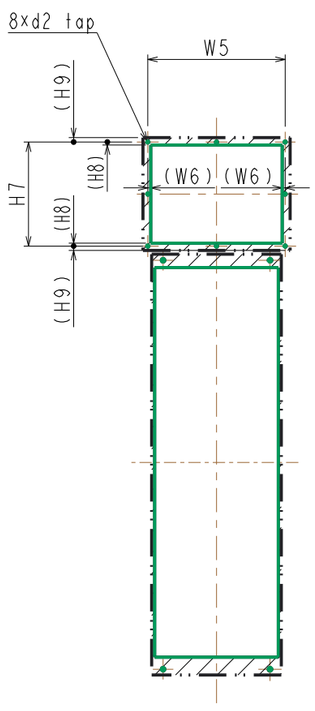


Fig.3a

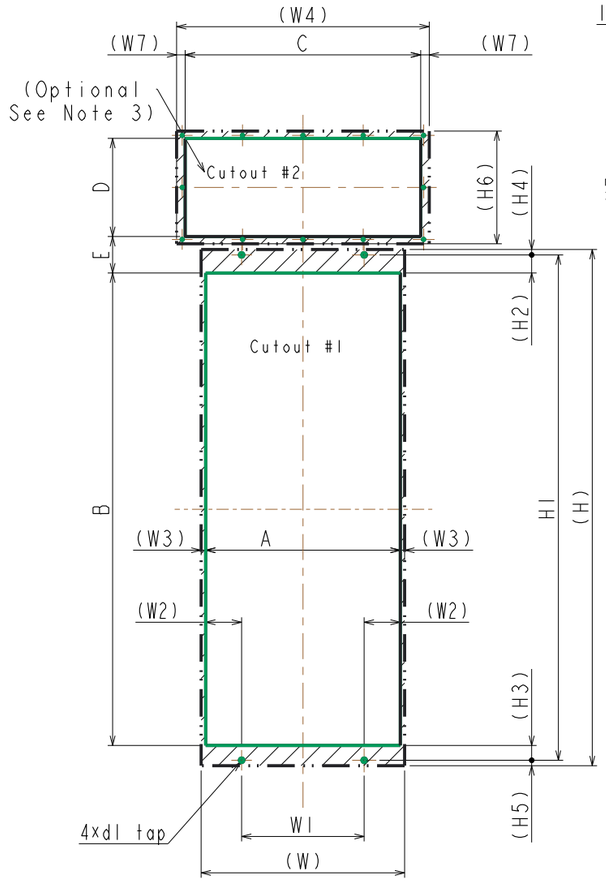
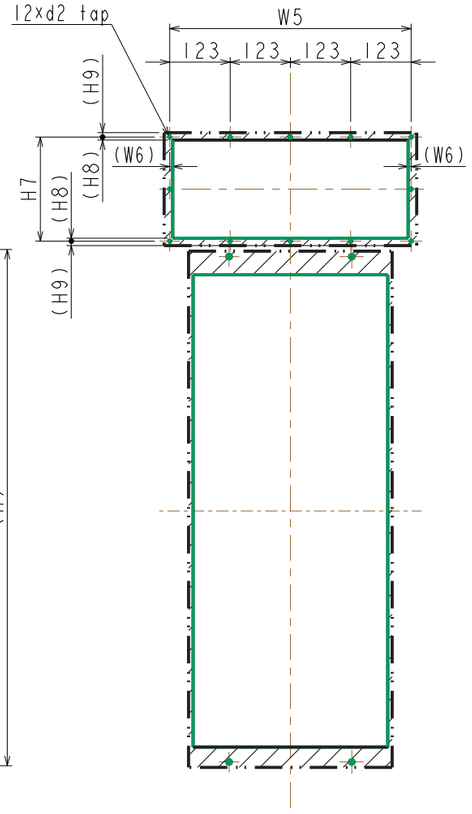


Fig.3b



Notes:
1.) Cutout #1: External Heatsink
2.) Exposed heatsink recommended clearence 7.87" (heatsink back face to wall)
3.) Optional Cutout #2 is an access hole to allow for front access during heatsink cooling fan replacement. The panel builder must supply the appropriate cover plate and hardware required to close this opening.

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Fig. 4a

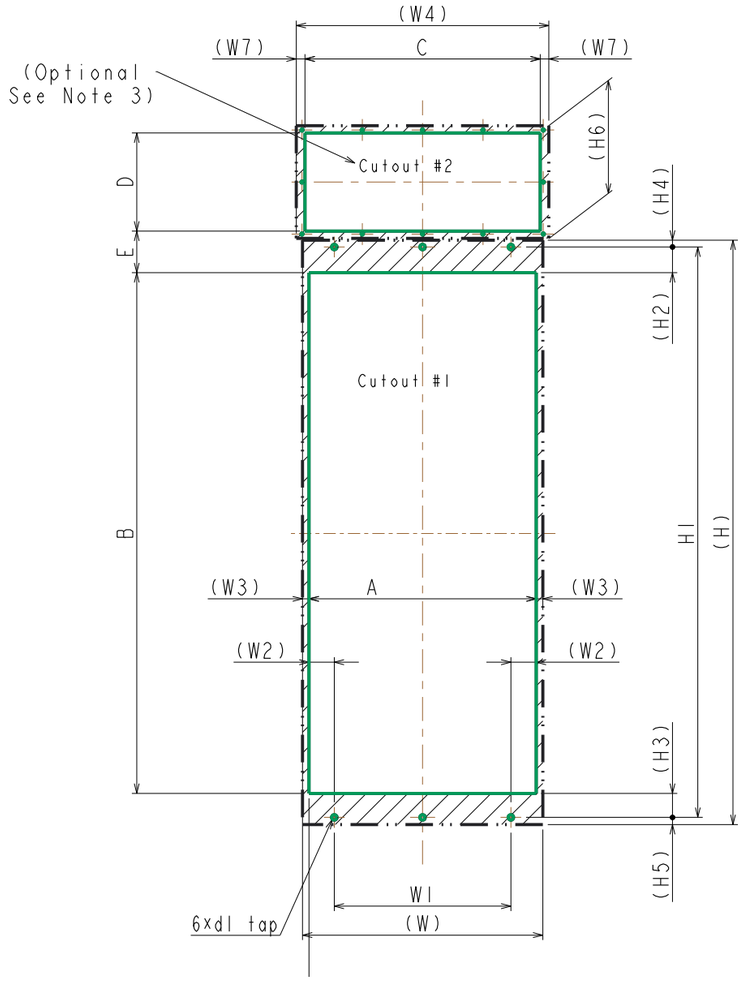
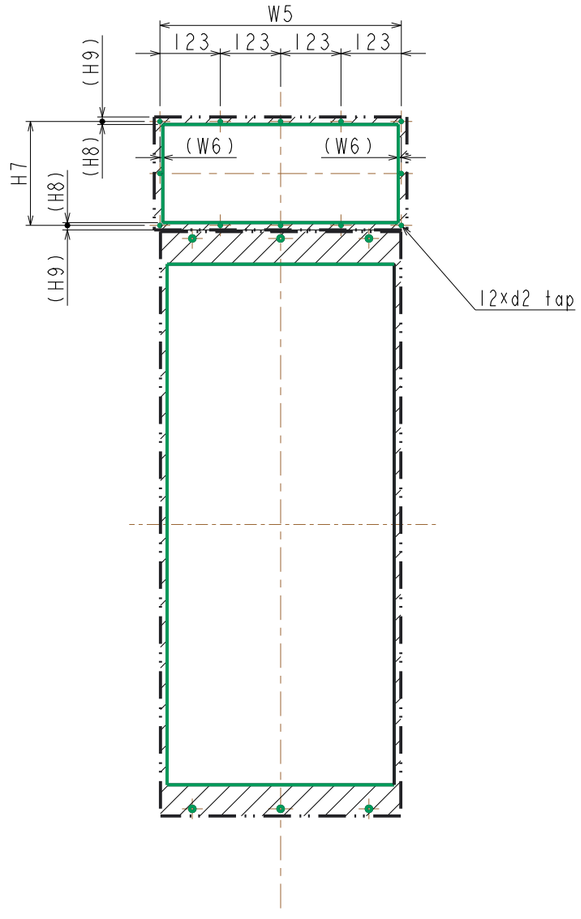


Fig. 4b



Notes:
1.) Cutout #1: External Heatsink
2.) Exposed heatsink recommended clearence 7.87" (heatsink back face to wall)
3.) Optional Cutout #2 is an access hole to allow for front access during heatsink cooling fan replacement. The panel builder must supply the appropriate cover plate and hardware required to close this opening.

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Fig.5a

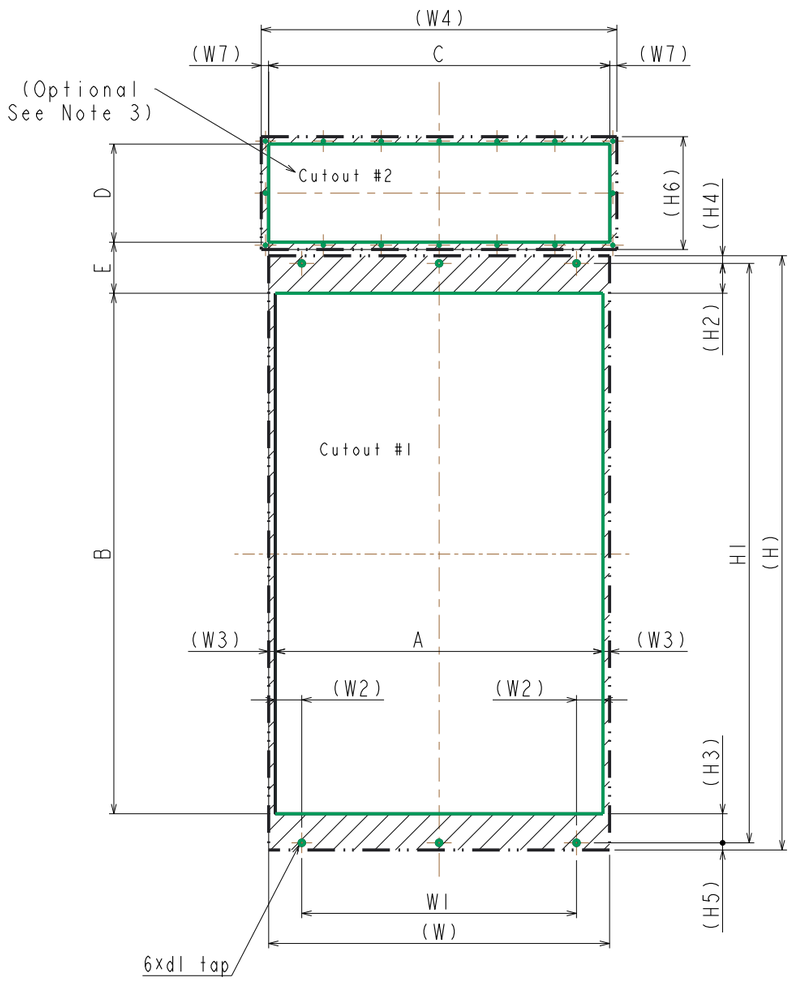
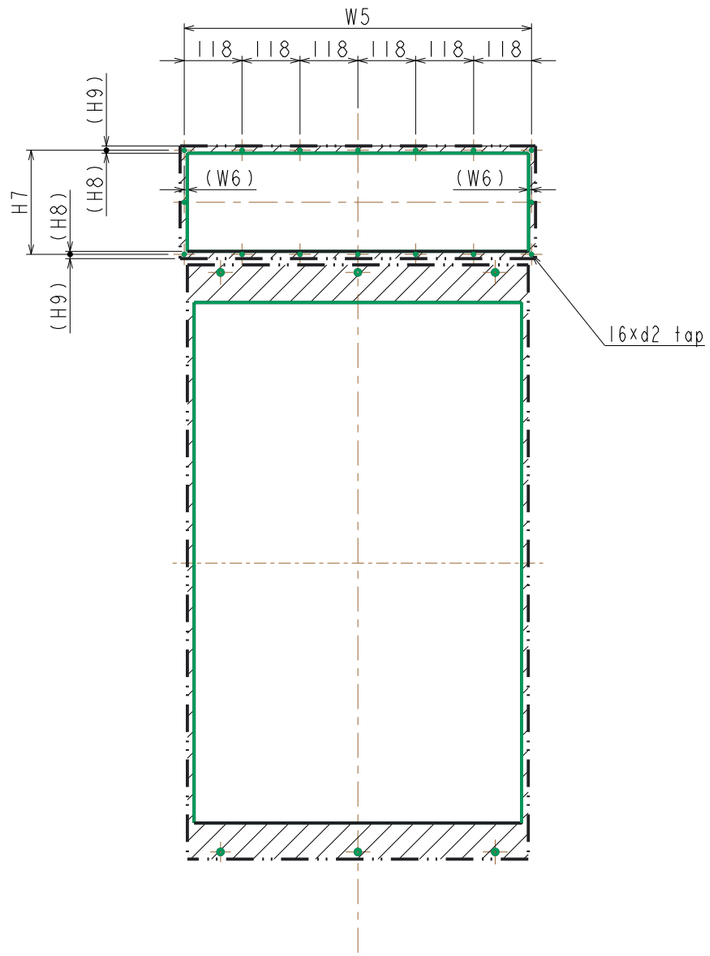


Fig.5b



Notes:
1.) Cutout #1: External Heatsink
2.) Exposed heatsink recommended clearence 7.87" (heatsink back face to wall)
3.) Optional Cutout #2 is an access hole to allow for front access during heatsink cooling fan replacement. The panel builder must supply the appropriate cover plate and hardware required to close this opening.

Dwg.No. UDA01009<1>-12/12