

# YASKAWA

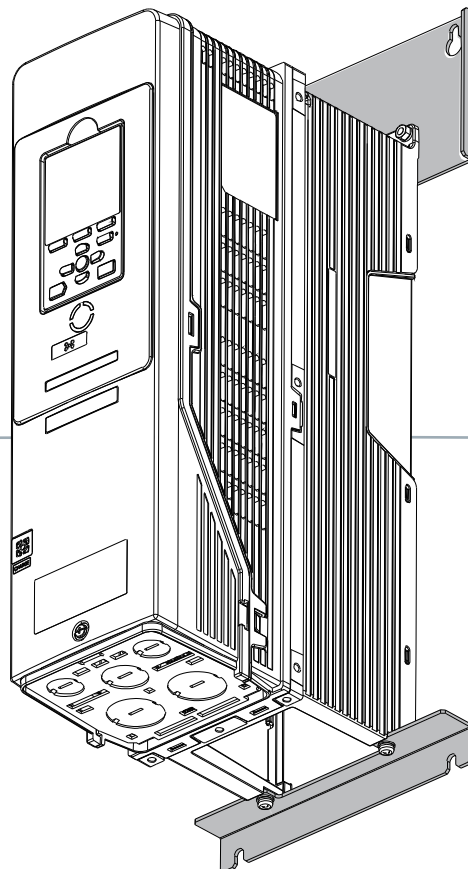
## Z1000 to HV600

### REPLACEMENT ATTACHMENT OPTION INSTALLATION MANUAL

#### STANDARD MOUNTING

#### CATALOG CODE:

ZPSA-600-RP-FRx



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DOCUMENT NUMBER: TOEPYAI0PT09

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# 1 Receiving

## ◆ Applicable Documentation

Document	Description
Yaskawa AC Drive Manuals	Refer to the manual packaged with the drive for basic information about the drive. Refer to the Technical Reference for more information about programming and parameter settings. You can download the Technical Reference from the Yaskawa website shown on the back cover of this manual.

## ◆ Glossary

Terminology Used in this Document	Description
Drive	YASKAWA AC Drive Z1000 YASKAWA AC Drive HV600
Kit Option	YASKAWA AC Drive Z1000 to HV600 Replacement Attachment Kit

# 2 General Safety

## ◆ Supplemental Safety Information

- ⚠ DANGER** This signal word identifies a hazard that will cause serious injury or death if you do not prevent it.
- ⚠ WARNING** This signal word identifies a hazard that can cause death or serious injuries if you do not prevent it.
- ⚠ CAUTION** Identifies a hazardous situation, which, if not avoided, can cause minor or moderate injury.
- NOTICE** This signal word identifies a property damage message that is not related to personal injury.

## ◆ Section Safety

General Precautions
<ul style="list-style-type: none"> <li>Some figures in the instructions include options and drives without covers or safety shields to more clearly show the inside of the drive. Replace covers and shields before operation. Use options and drives only as specified by the instructions.</li> <li>The figures in this manual are examples only. All figures do not apply to all products included in this manual.</li> <li>Yaskawa can change the products, specifications, and content of the instructions without notice to make the product and/or the instructions better.</li> <li>If you damage or lose these instructions, contact a Yaskawa representative or the nearest Yaskawa sales office on the rear cover of the manual, and tell them the document number on the front cover to order new copies.</li> </ul>

**⚠ DANGER** **Electrical Shock Hazard.** Do not examine, connect, or disconnect wiring on an energized drive. Before servicing, disconnect all power to the equipment and wait for the time specified on the warning label at a minimum. The internal capacitor stays charged after the drive is de-energized. The charge indicator LED extinguishes when the DC bus voltage decreases below 50 Vdc. When all indicators are OFF, remove the covers before measuring for dangerous voltages to make sure that the drive is safe. If you do work on the drive when it is energized, it will cause serious injury or death from electrical shock.

**⚠ CAUTION** **Burn Hazard.** Do not touch a hot drive heatsink. De-energize the drive, wait for a minimum of 15 minutes, then make sure that the heatsink is cool before you replace the cooling fans. If you touch a hot drive heatsink, it can burn you.

**⚠ WARNING** **Electrical Shock Hazard.** Only let approved personnel install, wire, maintain, examine, replace parts, and repair the drive. If personnel are not approved, it can cause serious injury or death.

**⚠ WARNING** **Sudden Movement Hazard.** Tighten the screws to the specified tightening torque. Incorrect tightening torques can cause damage to equipment and cause serious injury or death from falling equipment.

**NOTICE** **Damage to Equipment.** When you touch the drive and circuit boards, make sure that you observe correct electrostatic discharge (ESD) procedures. If you do not follow procedures, it can cause ESD damage to the drive circuitry.

## 3 Overview

This manual shows how to install the option on an HV600 drive so that you can use the existing mounting holes from a Z1000 drive installation when you replace a standard-mounted Z1000 drive with a standard-mounted HV600 drive.

### ◆ Compatible Products and Specifications

**Table 3.1 240 V Models**

Drive		Option Product Code	Part Code		Supplied Hardware	Installation Procedure and Dimensions Reference
Z1000 CIMR-Zx	HV600 Catalog Code HV60x		Attachment A	Attachment B		
2x0011 2x0017 2x0024 2x0031 2x0046 2x0059 2x0075 2x0088 2x0114	2011 2017 2024 2031 2046 2059 2075 2088 2114	Replacement Attachment Option is not necessary				
2x0143 2x0169	2143 2169	ZPSA-600-RP-FR6	USP05540-021	USP05541-021	-	Procedure 3 11
2x0211 2x0273	2211 2273	ZPSA-600-RP-FR9	USP05568-021	USP05541-021	M10 × 25 cross-recessed hexagonal head bolt (2)	Procedure 3 11

**Table 3.2 480 V Models**

Drive		Option Product Code	Part Code		Supplied Hardware	Installation Procedure and Dimensions Reference
Z1000 CIMR-Zx	HV600 Catalog Code HV60x		Attachment A	Attachment B		
4x0005 4x0008 4x0011	4005 4008 4011	Replacement Attachment Option is not necessary				
4x0014	4014	ZPSA-600-RP-FR1	USP05533-021	USP05534-021	M5 × 14 pan head screw (4)	Procedure 1 6
4x0021 4x0027	4021 4027	Replacement Attachment Option is not necessary				
4x0034	4034	ZPSA-600-RP-FR2	USP05535-021	USP05536-021	M5 nut (2) M5 spring washer (2) M5 × 14 pan head screw (2)	Procedure 2 9
4x0040 4x0052xxB	4040 4052	Replacement Attachment Option is not necessary				
4x0052xxA 4x0065	4052 4065	ZPSA-600-RP-FR3	USP05545-021	USP05546-021	M6 × 16 pan head screw (4)	Procedure 1 6
4x0077 4x0096	4077 4096	Replacement Attachment Option is not necessary				
4x0124	4124	ZPSA-600-RP-FR4	USP05542-011	USP05543-021	M6 × 20 pan head screw (4)	Procedure 1 6
4x0156	4156	ZPSA-600-RP-FR6	USP05540-021	USP05541-021	-	Procedure 3 11
4x0180 4x0240	4180 4240	ZPSA-600-RP-FR9	USP05568-021	USP05541-021	M10 × 25 cross-recessed hexagonal head bolt (2)	Procedure 3 11
4x0302	4302	ZPSA-600-RP-FR10	USP05571-011	-	M12 × 30 cross-recessed hexagonal head bolt (4)	Procedure 4 13

### ◆ Required Tools

A Phillips screwdriver #2 is necessary to install the attachment.

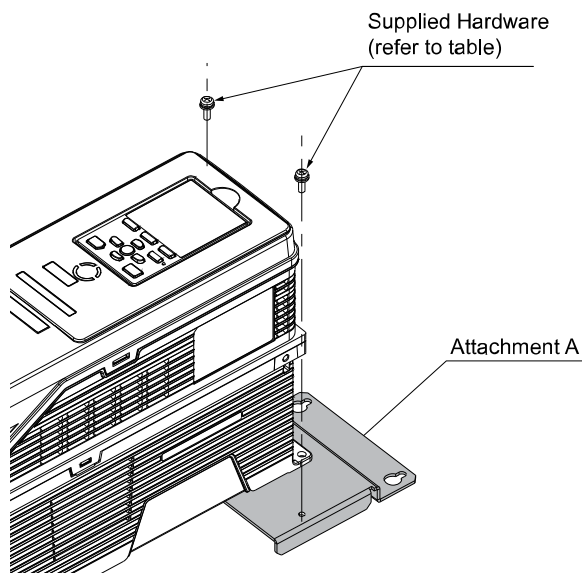
## 4 Replacement Attachment Installation Procedures

**⚠ CAUTION** *Crush Hazard. Tighten terminal cover screws and hold the case safely when you move the drive. If the drive or covers fall, it can cause moderate injury.*

### ◆ Procedure for HV600 Models 4014, 4052, 4065, and 4124

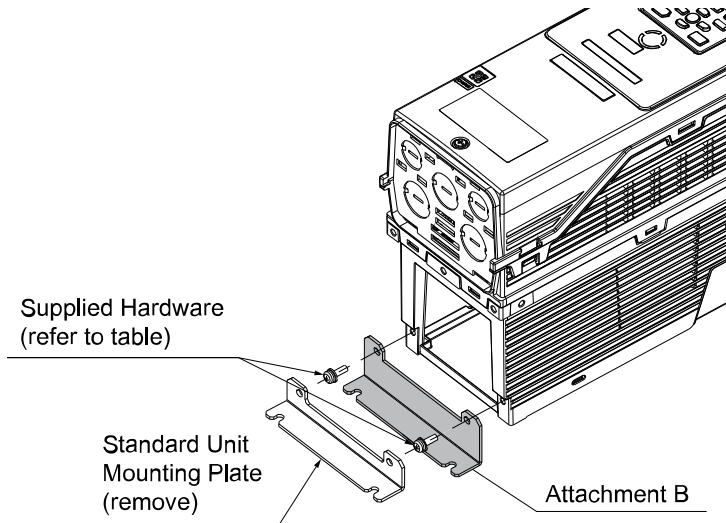
Drive		Option Product Code	Part Code		Supplied Hardware
Z1000 CIMR-Zx	HV600 Catalog Code HV60x		Attachment A	Attachment B	
4x0014	4014	ZPSA-600-RP-FR1	USP05533-021	USP05534-021	M5 × 14 pan head screw (4)
4x0052xxA 4x0065	4052 4065	ZPSA-600-RP-FR3	USP05545-021	USP05546-021	M6 × 16 pan head screw (4)
4x0124	4124	ZPSA-600-RP-FR4	USP05542-011	USP05543-021	M6 × 20 pan head screw (4)

1. Use the supplied hardware to attach Attachment A to the top of the drive.



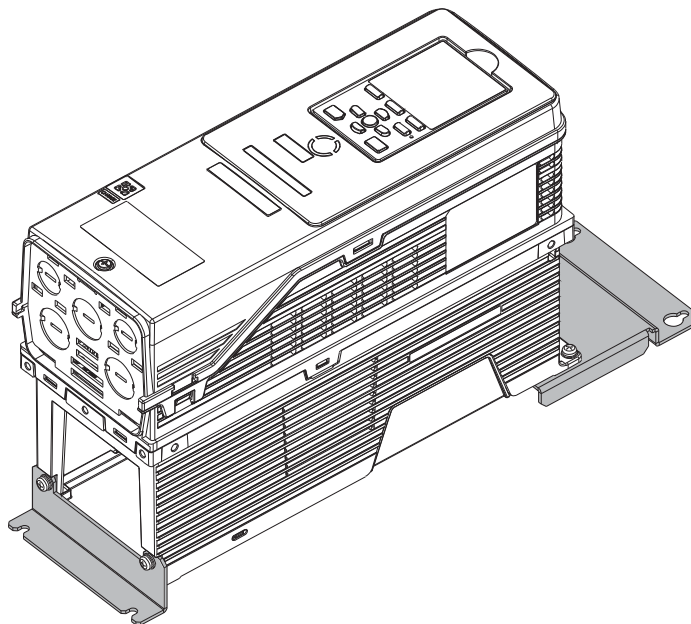
**Figure 4.1 Attach Attachment A**

2. Remove the Standard Unit Mounting Plate. Use the supplied hardware to attach Attachment B to the bottom of the drive.



**Figure 4.2 Attach Attachment B**

3. Installation is complete.



**Figure 4.3 Installation Complete**

4 Replacement Attachment Installation Procedures

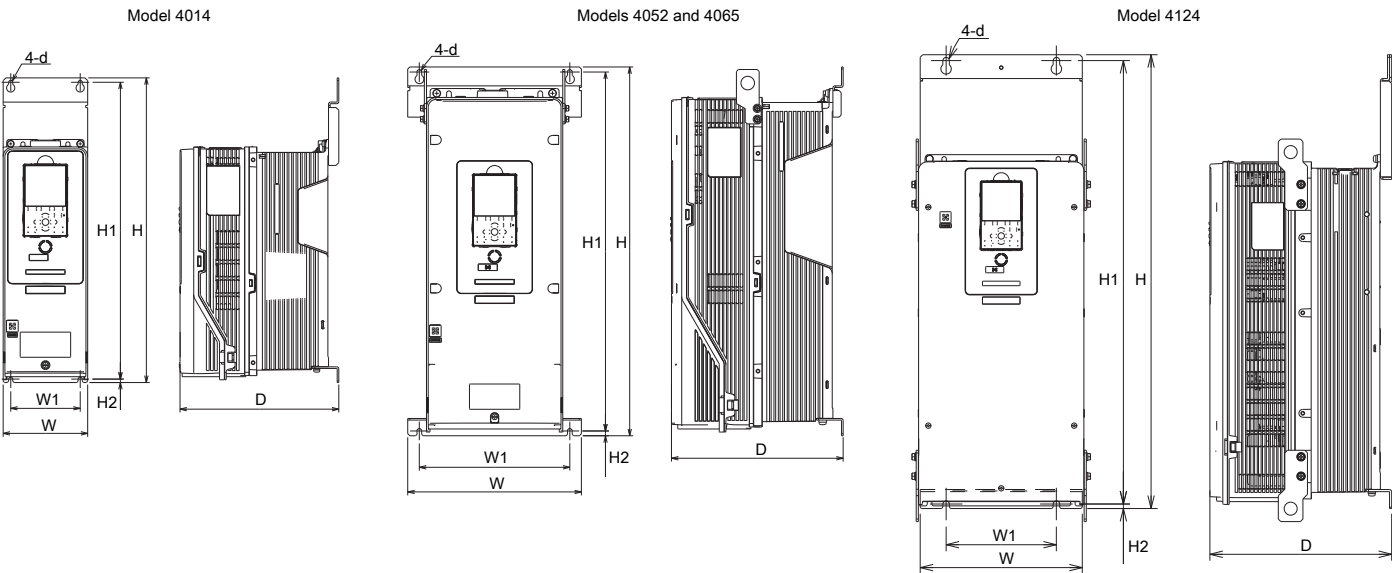


Figure 4.4 Exterior and Mounting Dimensions after Installation

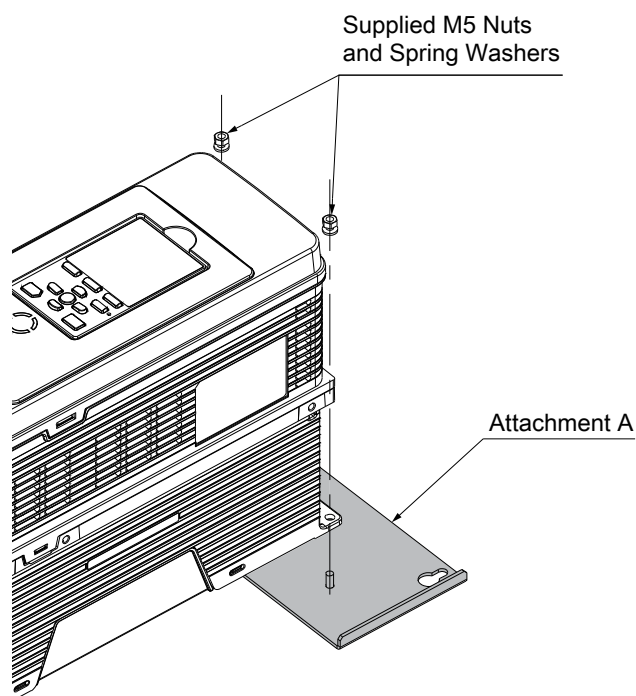
HV600 Catalog Code HV60x	Dimensions mm (in)						
	W	H	D	W1	H1	H2	d
480 V							
4014	124 (4.9)	447.5 (17.6)	233 (9.2)	102 (4)	436 (17.2)	5 (0.2)	M5
4052 4065	255 (10)	541.7 (21.3)	252 (9.9)	221 (8.7)	527 (20.7)	7.2 (0.3)	M6
4124	250 (9.8)	700 (27.6)	280.3 (11)	170 (6.7)	684 (26.9)	7 (0.3)	M8



# ◆ Procedure for Model 4034

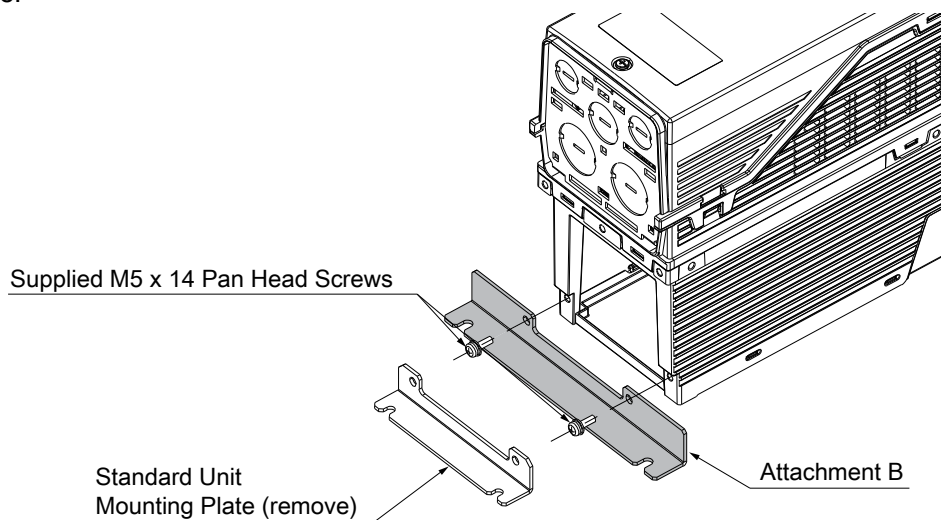
Drive		Option Product Code	Part Code		Supplied Hardware
Z1000 CIMR-Zx	HV600 Catalog Code HV60x		Attachment A	Attachment B	
4x0034	4034	ZPSA-600-RP-FR2	USP05535-021	USP05536-021	M5 nut (2) M5 spring washer (2) M5 × 14 pan head screw (2)

1. Use the supplied hardware to attach Attachment A to the top of the drive.



**Figure 4.5 Attach Attachment A**

2. Remove the Standard Unit Mounting Plate. Use the supplied hardware to attach Attachment B to the bottom of the drive.



**Figure 4.6 Attach Attachment B**

3. Installation is complete.

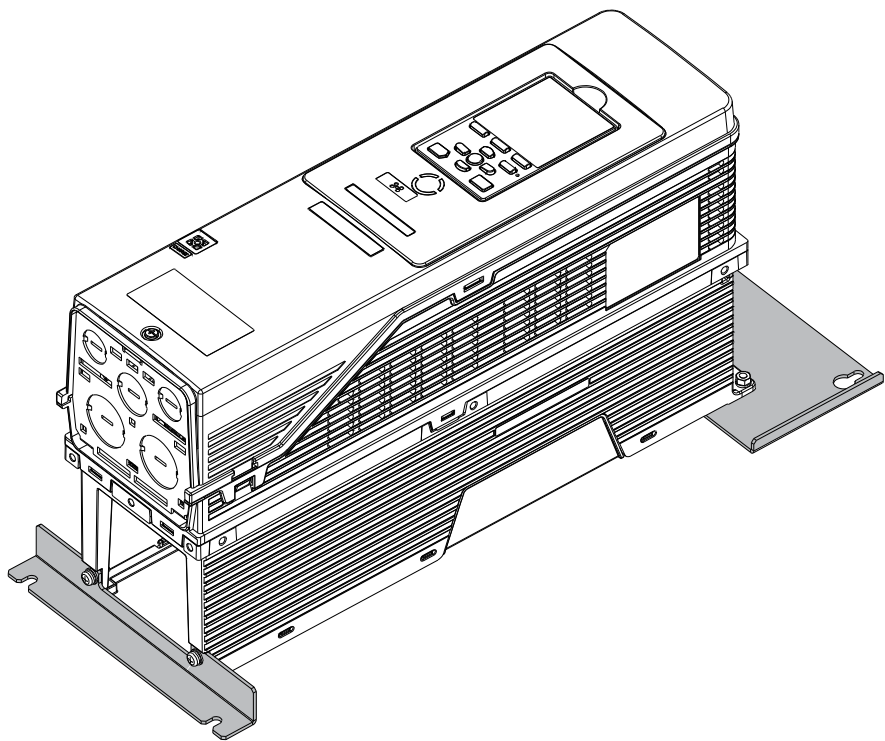


Figure 4.7 Installation Complete

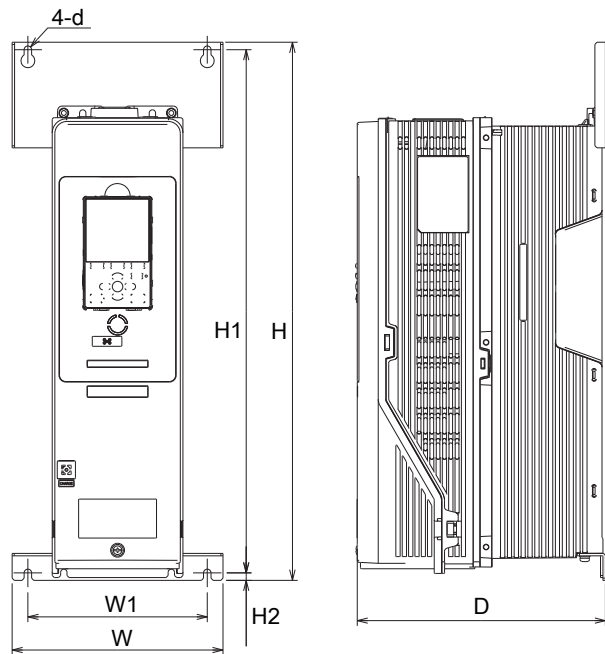


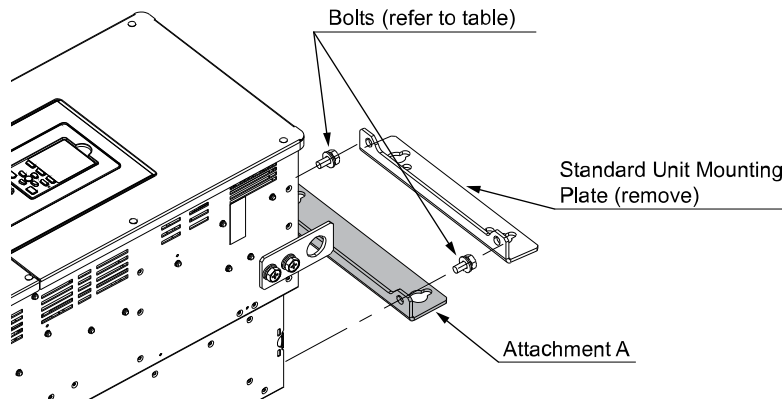
Figure 4.8 Exterior and Mounting Dimensions after Installation

HV600 Catalog Code HV60x	Dimensions mm (in)						
	W	H	D	W1	H1	H2	d
480 V							
4034	200 (7.9)	510 (21.1)	235.3 (9.3)	170 (6.7)	496 (19.5)	7 (0.3)	M6

# ◆ Procedure for Models 2143 to 2273 and 4156 to 4240

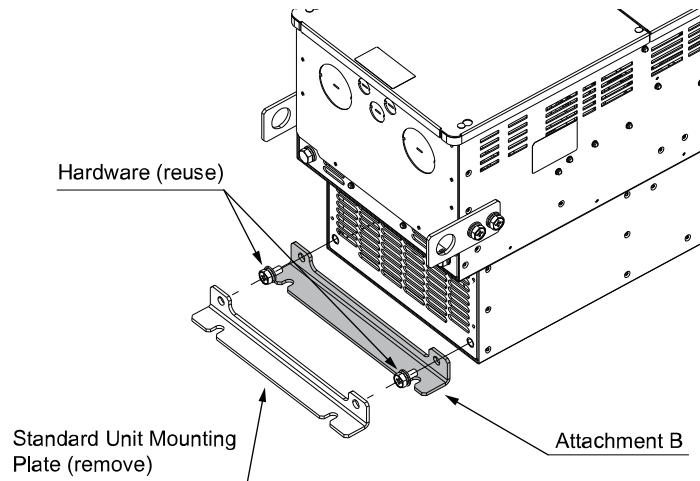
Drive		Option Product Code	Part Code		Supplied Hardware
Z1000 CIMR-Zx	HV600 Catalog Code HV60x		Attachment A	Attachment B	
2x0143 2x0169 4x0156	2143 2169 4156	ZPSA-600-RP-FR6	USP05540-021	USP05541-021	Reuse hardware from standard unit
2x0211 2x0273 4x0180 4x0240	2211 2273 4180 4240	ZPSA-600-RP-FR9	USP05568-021	USP05541-021	M10 × 25 cross-recessed hexagonal head bolt (2)

1. Remove the Standard Unit Mounting Plate from the top of the drive. Attach Attachment A in its place.



**Figure 4.9 Attach Attachment A**

2. Remove the Standard Unit Mounting Plate from the bottom of the drive. Reuse the hardware and attach Attachment B in its place.



**Figure 4.10 Attach Attachment B**

3. Installation is complete.

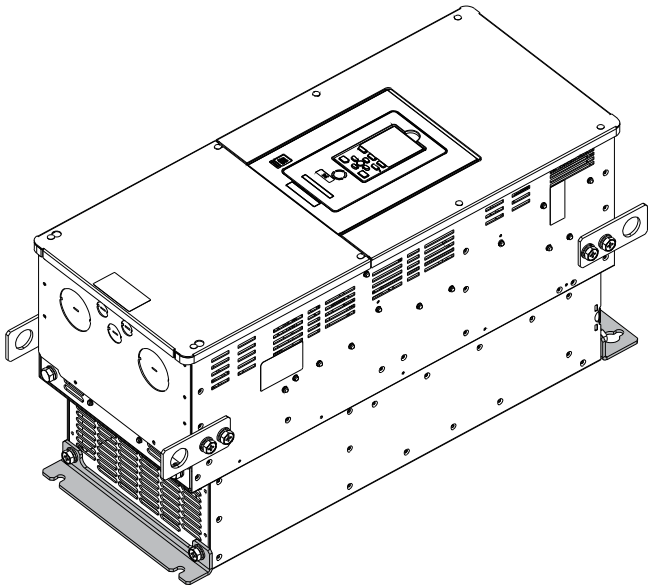


Figure 4.11 Installation Complete

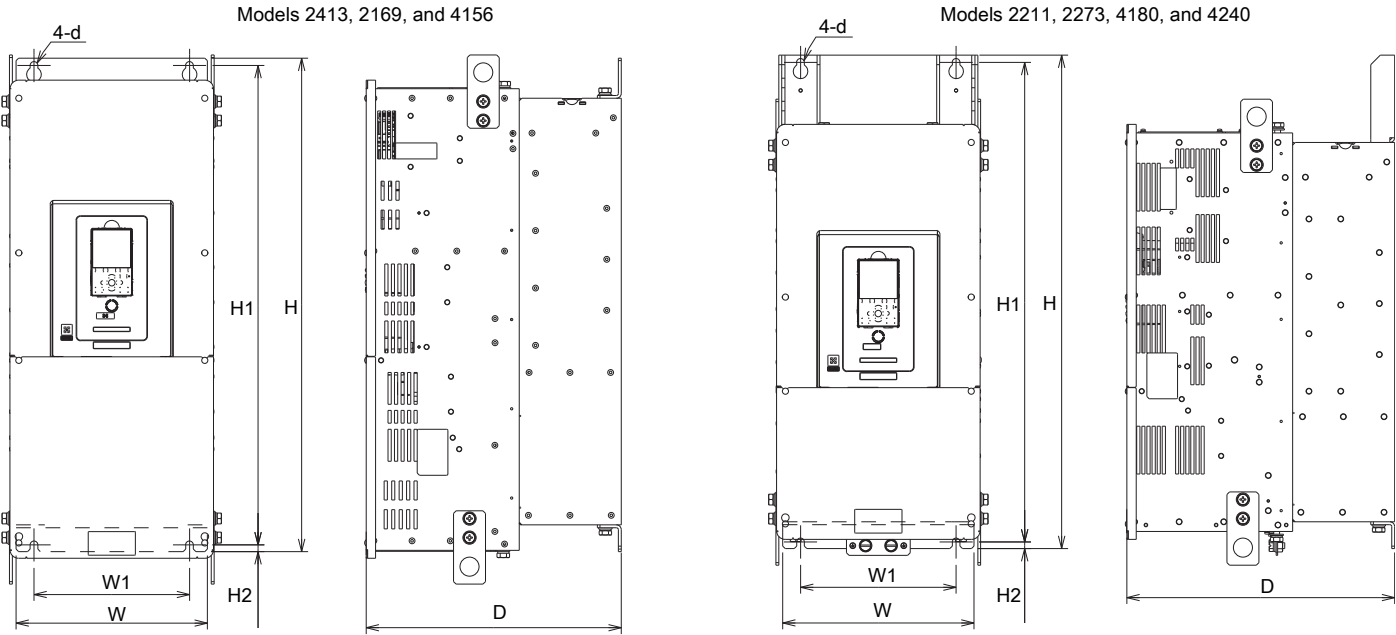


Figure 4.12 Exterior and Mounting Dimensions after Installation

HV600 Catalog Code HV60x		Dimensions mm (in)						
208 V	480 V	W	H	D	W1	H1	H2	d
2143 2169	4156	300 (11.8)	774 (30.5)	400 (15.7)	244 (9.6)	752 (29.6)	10.5 (0.4)	M10
2211 2273	4180 4240	300 (11.8)	774 (30.5)	420 (16.5)	244 (9.6)	752 (29.6)	10.5 (0.4)	M10

## ◆ Procedure for Model 4302

Drive		Option Product Code	Part Code	Supplied Hardware
Z1000 CIMR-Zx	HV600 Catalog Code HV60x		Attachment A	
4x0302	4302	ZPSA-600-RP-FR10	USP05571-011	M12 × 30 cross-recessed hexagonal head bolt (4)

1. Use the supplied hardware to attach Attachment A to the drive.

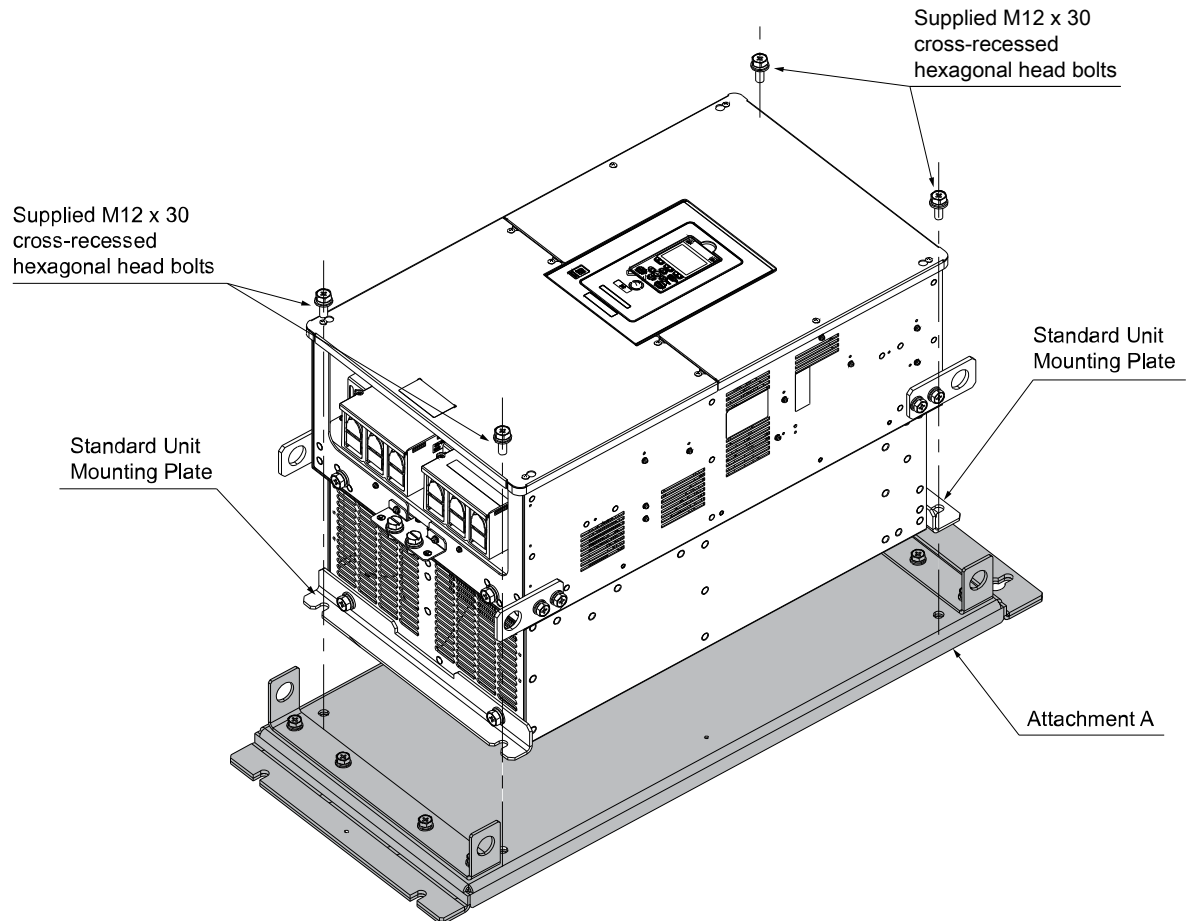
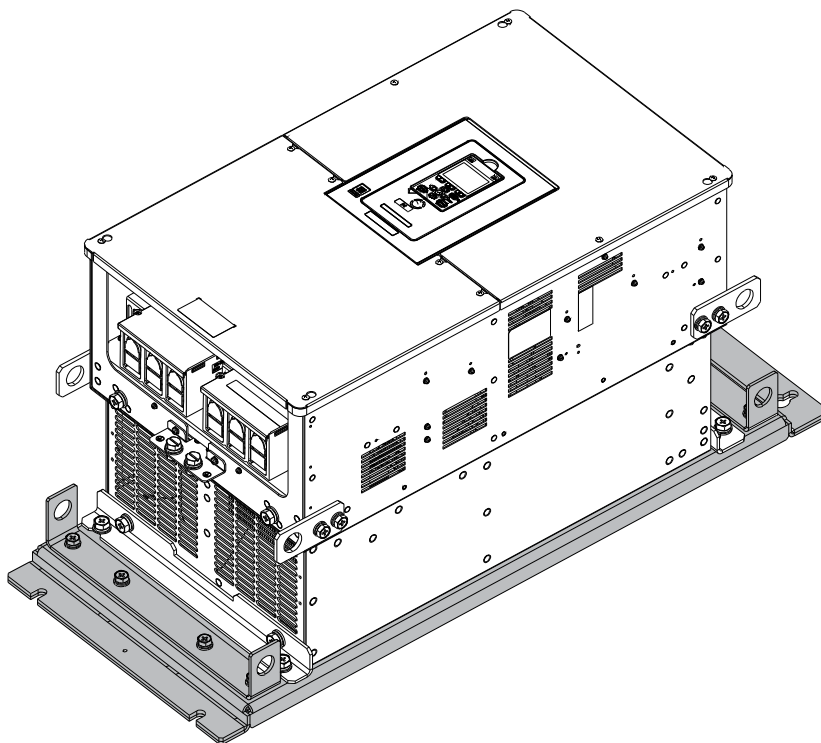


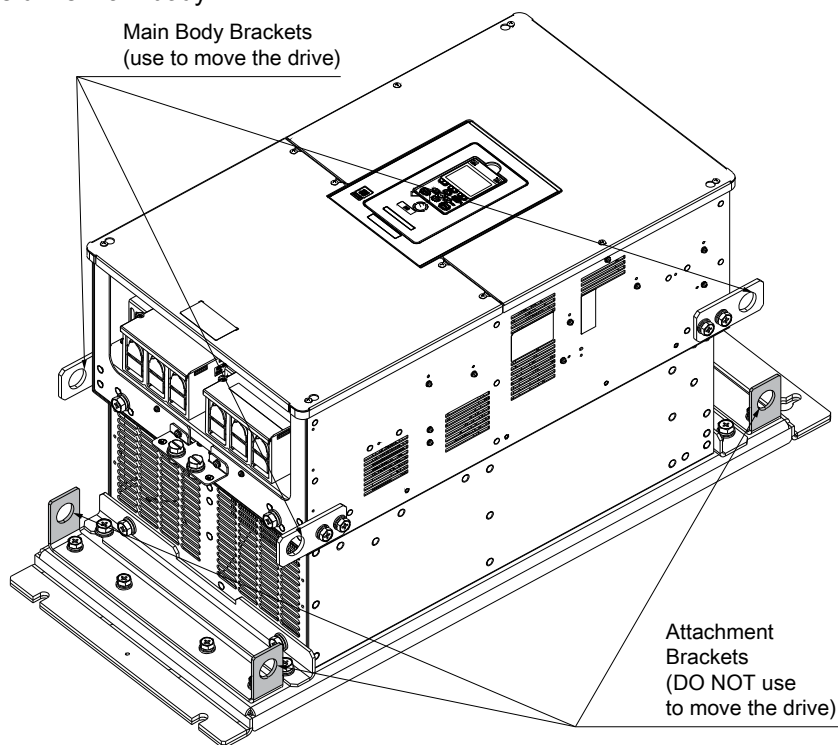
Figure 4.13 Attach Attachment A

- Installation is complete.



**Figure 4.14 Installation Complete**

- After installation is complete, do not use the brackets on the attachment to move the drive. Use the hanging brackets on the drive main body.



**Figure 4.15 Attachment Brackets**

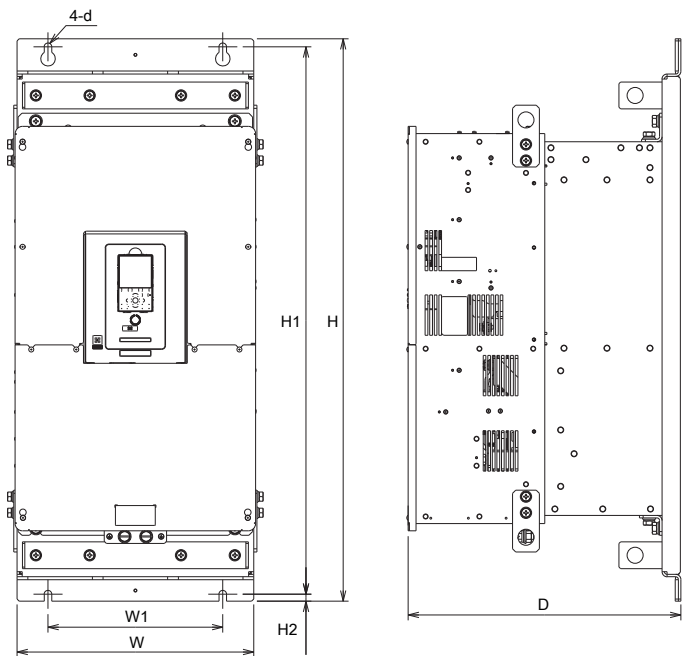


Figure 4.16 Exterior and Mounting Dimensions after Installation

HV600 Catalog Code HV60x	Dimensions mm (in)						
	W	H	D	W1	H1	H2	d
480 V							
4302	440 (17.3)	1045 (41.1)	507 (20)	325 (12.8)	1018 (40.1)	13 (0.5)	M12

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## Revision History

Date of Publication	Revision Number	Section	Revised Content
April 2021	–	–	First Edition. Original source document is 900-252-233.





# YASKAWA

## Z1000 to HV600 REPLACEMENT ATTACHMENT OPTION INSTALLATION MANUAL

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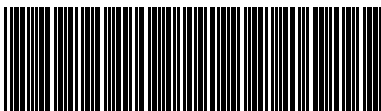
In the event that the end user of this product is to be the military and said product is to be employed in any weapons systems or the manufacture thereof, the export will fall under the relevant regulations as stipulated in the Foreign Exchange and Foreign Trade Regulations. Therefore, be sure to follow all procedures and submit all relevant documentation according to any and all rules, regulations and laws that may apply.

Specifications are subject to change without notice for ongoing product modifications and improvements.

Original instructions.

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