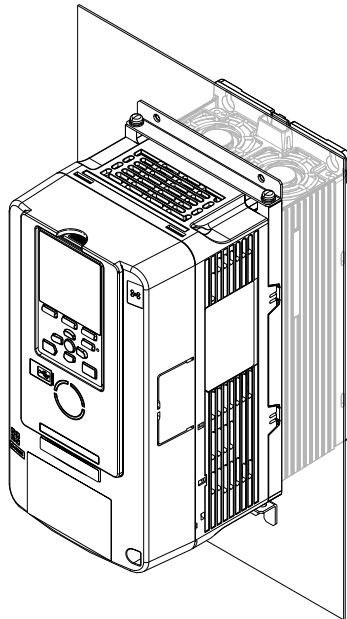


YASKAWA AC Drive Option External Heatsink Installation Kit Instruction Manual

Model 900-193-209-xxx

To properly use the product, read this manual thoroughly and retain for easy reference, inspection, and maintenance. Ensure the end user receives this manual.



This Page Intentionally Blank

Table of Contents

1.	Receiving	4
	Applicable Documentation	4
	Glossary	4
2.	General Safety	4
	Supplemental Safety Information	4
	Section Safety	5
3.	Overview	5
	Compatible Products	5
	Installation Environment	6
4.	Receiving	7
	Option Package Contents	7
5.	Install the Attachment	7
	Necessary Tools	7
	Drive Mounting Dimensions and Panel Cut-out Dimensions	8
	Drive External Dimensions	9
	Panel Cut-Out Dimensions	12
	Kit Models and Installation Procedure	14
	Use the External Heatsink Installation Kit (Procedure A)	15
	Use the Mounting Bracket Supplied with the Drive (Procedure B)	17
	Use the Mounting Bracket Supplied with the Drive (Procedure C)	19
	Gasket and Sealant	21
	Revision History	23

1 Receiving

◆ Applicable Documentation

Document	Description
YASKAWA AC Drive Option External Heatsink Installation Kit Instruction Manual	Read this manual before you install the kit. The manual contains information about how to install the kit to put the heatsink external to the enclosure panel.
YASKAWA AC Drive Manuals	Refer to the manual packaged with the drive for basic information about the drive. Refer to the Technical Manual for more information about programming and parameter settings. You can download drive manuals from the Yaskawa product and technical information website shown on the back cover of this manual.

◆ Glossary

Terminology Used in this Document	Description
Drive	<ul style="list-style-type: none"> • YASKAWA AC Drive GA700 • YASKAWA AC Drive GA800 • YASKAWA AC Drive CH700 • YASKAWA AC Drive CR700
Kit	YASKAWA AC Drive Option External Heatsink Installation 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

- 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.
- The figures in this manual are examples only. All figures do not apply to all products included in this manual.
- Yaskawa can change the products, specifications, and content of the instructions without notice to make the product and/or the instructions better.
- 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.

▲ 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

You can install the drive with the heatsink external to the enclosure panel. This installation method is “external heatsink installation”. This kit uses attachments to do an external heatsink installation on drives that do not have mounting brackets on the heatsink. When you use this kit to install the drive with the heatsink external, the drive will release its heat external to the enclosure panel. This will let you install the drive in a smaller enclosure panel and prevent too much heat in the enclosure panel.

This manual also tells you how to use the mounting brackets supplied with the drive to do an external heatsink installation.

◆ Compatible Products

This installation kit is compatible with these drives:

- GA700
- GA800
- CH700
- CR700

◆ Installation Environment

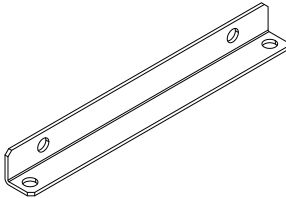

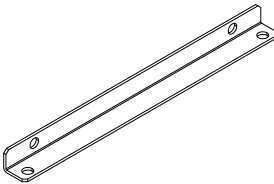

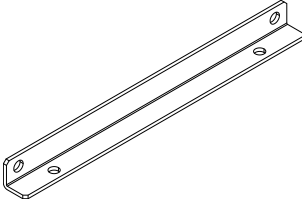

Environment	Conditions
Area of Use	Indoors
Power Supply	Overvoltage Category III
Ambient Temperature Setting	IP20/UL Open Type: -10°C to +50 °C (14 °F to 122 °F) IP20/UL Type 1: -10 °C to +40 °C (14 °F to 104 °F) <ul style="list-style-type: none"> • Drive reliability is better in environments where the temperature does not increase or decrease quickly. • When you install the drive in an enclosure, use a cooling fan or air conditioner to keep the internal air temperature in the permitted range. • Do not let the drive freeze. • You can use IP20/UL Open Type drives at a maximum of 60 °C (140 °F) when you derate the output current. • You can use IP20/UL Type 1 drives at a maximum of 50 °C (122 °F) when you derate the output current.
Humidity	95%RH or less Do not let condensation form on the drive.
Storage Temperature	-20°C to +70°C (-4°F to +158°F) (short-term temperature during transportation)
Surrounding Area	Pollution degree 2 or less Install the drive in an area without: <ul style="list-style-type: none"> • Oil mist, corrosive or flammable gas, or dust • Metal powder, oil, water, or other unwanted materials • Radioactive or flammable materials. • Harmful gas or fluids • Salt • Direct sunlight Keep wood and other flammable materials away from the drive.
Altitude	1000 m (3281 ft) Maximum Note: Derate the output current by 1% for each 100 m (328 ft) to install the drive in altitudes between 1000 m to 4000 m (3281 ft to 13123 ft). It is not necessary to derate the rated voltage in these conditions: <ul style="list-style-type: none"> • Installing the drive at 2000 m (6562 ft) or lower • Installing the drive between 2000 m to 4000 m (6562 ft to 13123 ft) and grounding the neutral point on the power supply. Contact Yaskawa or your nearest sales representative if you will not ground the neutral point.
Vibration	<ul style="list-style-type: none"> • 10 Hz to 20 Hz: 1 G (9.8 m/s², 32.15 ft/s²) • 20 Hz to 55 Hz: Different for different models. Refer to the manual packaged with the drive.
Installation Orientation	Install the drive vertically for sufficient airflow to cool the drive.

NOTICE Do not let unwanted objects, for example metal shavings or wire clippings, fall into the drive during drive installation. Put a temporary cover over the drive during installation. Remove the temporary cover before start-up. Unwanted objects inside of the drive can cause damage to the drive.

4 Receiving

1. Examine the products for damage.
If there is damage to the products, contact the shipping company immediately. The Yaskawa warranty does not include damage from shipping.
2. Verify the product model number to make sure that you received the correct model.
If you have problems with the products, contact the distributor where you purchased the products or the Yaskawa sales office immediately.

◆ Option Package Contents

Model	Attachments	Mounting Screws
900-193-209-001	 #1	 #2
900-193-209-002	 #1	 #2
900-193-209-003	 #1	 #2

5 Install the Attachment

◆ Necessary Tools

To install the attachment, use Phillips screwdriver #2.

◆ Drive Mounting Dimensions and Panel Cut-out Dimensions

Drive Model		Model Group	Drive Exterior and Mounting Dimensions	Panel Cut-Out Dimensions
GA700 GA800	2004, 2006, 2008, 2010, 2012 4002, 4004, 4005	A	Table 5.1	Table 5.3
	2018, 2021, 2030, 2042 4007, 4009, 4012, 4018, 4023	B		
	2056 4031, 4038	C		
	2070, 2082 4044	D		
	4060	E		
	2110 4075	F		
	2138 4089, 4103	G		
	2169, 2211 4140, 4168	H		
	2257, 2313 4208, 4250, 4296, 4302	I		
	2360, 2415 4371, 4389, 4414	J		
4453, 4477, 4568, 4605, 4675, 4720 5382, 5412, 5472	K	Table 5.2	Table 5.4	
CH700 CR700	2003, 2005, 2007, 2008, 2011 4003 4005	A	Table 5.1	Table 5.3
	2014 2018, 2025, 2033 4006, 4007, 4009, 4015, 4018	B		
	2045 4024, 4031	C		
	2060 4039	D		
	4045	E		
	2088 4060	F		
	2115 4075, 4091	G		
	2145, 2180 4112, 4150	H		
	2215, 2283	I		

Drive Model		Model Group	Drive Exterior and Mounting Dimensions	Panel Cut-Out Dimensions
	4180, 4216, 4260			
	2346, 2415 4304, 4371	J		
	4414, 4543, 4605	K	Table 5.2	Table 5.4

■ Drive External Dimensions

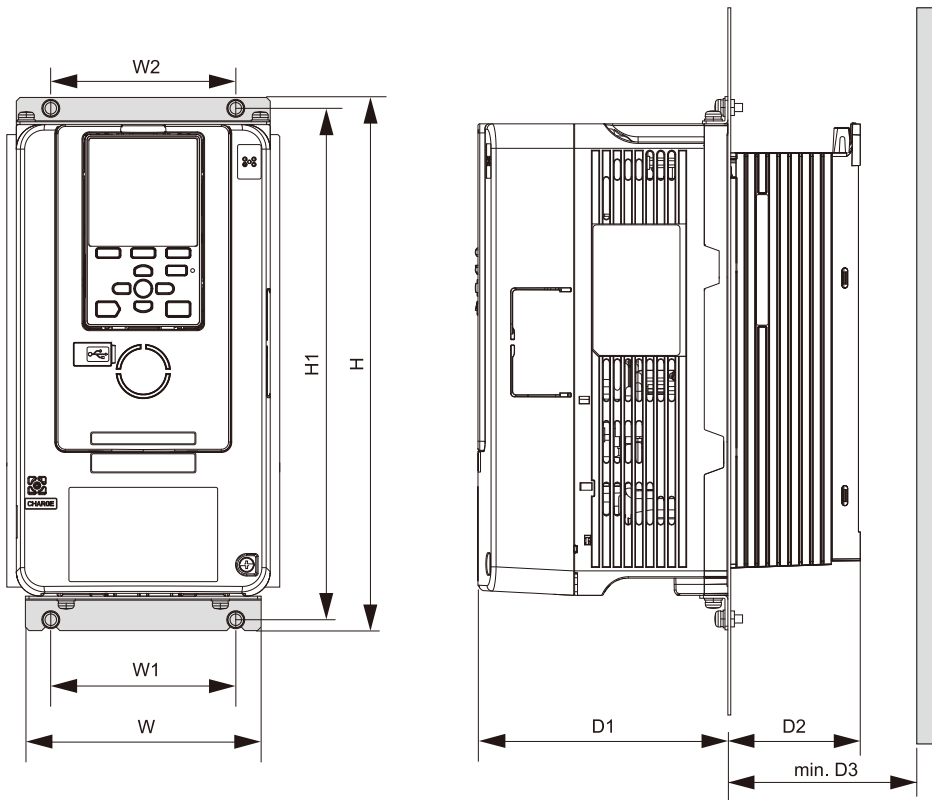


Figure 5.1 Drive External Dimensions

Table 5.1 Drive External Dimensions

Model Group	Dimensions mm (in)							
	W	H	D1	D2	D3	W1	W2	H1
A	140 (5.51)	294 (11.57)	138 (5.43)	38 (1.50)	43 (1.69)	102 (4.02)	102 (4.02)	282 (11.10)
B	140	294	138	73	78	102	102	282

5 Install the Attachment

Model Group	Dimensions mm (in)							
	W	H	D1	D2	D3	W1	W2	H1
	(5.51)	(11.57)	(5.43)	(2.87)	(3.07)	(4.02)	(4.02)	(11.10)
C	180 (7.09)	329 (12.95)	134 (5.28)	68 (2.68)	73 (2.87)	140 (5.51)	140 (5.51)	318 (12.52)
D	220 (8.66)	384 (15.12)	140 (5.51)	87 (3.43)	92 (3.62)	192 (7.56)	192 (7.56)	371 (14.61)
E	220 (8.66)	384 (15.12)	140 (5.51)	106 (4.17)	111 (4.37)	192 (7.56)	192 (7.56)	371 (14.61)
F	240 (9.45)	400 (15.75)	166 (6.54)	114 (4.49)	119 (4.69)	195 (7.68)	204 (8.03)	385 (15.16)
G	255 (10.04)	450 (17.72)	166 (6.54)	114 (4.49)	119 (4.69)	170 (6.69)	210 (8.27)	436 (17.17)
H	264 (10.39)	543 (21.38)	186 (7.32)	149 (5.87)	154 (6.06)	190 (7.48)	220 (8.66)	527 (20.75)
I	312 (12.28)	700 (27.56)	260 (10.24)	160 (6.30)	165 (6.50)	218 (8.58)	263 (10.35)	675 (26.56)
J	440 (17.32)	800 (31.50)	254 (10.00)	218 (8.58)	223 (8.78)	370 (14.57)	310 (12.20)	773 (30.43)

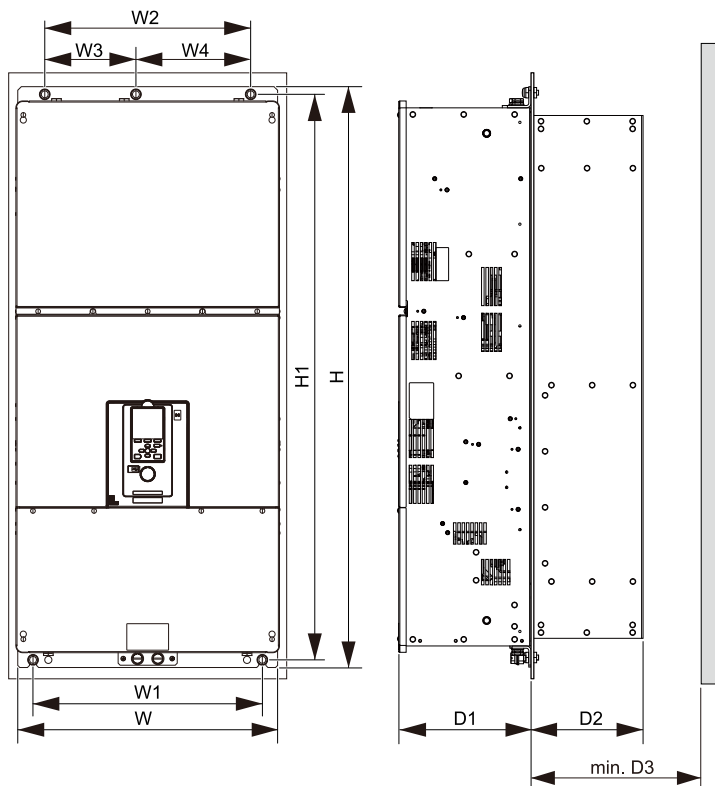


Figure 5.2 Drive External Dimensions

Table 5.2 Drive External Dimensions

Model Group	Dimensions mm (in)									
	W	H	D1	D2	D3	W1	W2	W3	W4	H1
K	510 (20.08)	1140 (44.88)	260 (10.24)	220 (8.66)	225 (8.86)	450 (17.72)	404 (15.91)	179 (7.05)	225 (8.86)	1110 (43.70)

■ Panel Cut-Out Dimensions

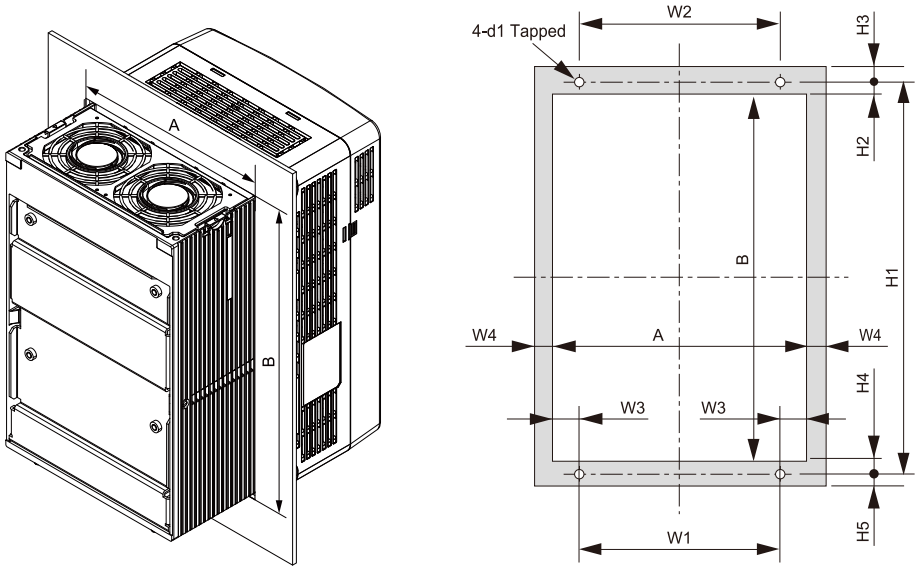


Figure 5.3 Panel Cut-Out Dimensions

Table 5.3 Panel Cut-Out Dimensions

Model Group	Dimensions mm (in)											
	W1	W2	W3	W4 *1	H1	H2 *1	H3 *1	H4 *1	H5 *1	A	B	d1
A	102 (4.02)	102 (4.02)	16 (0.63)	3 (0.12)	282 (11.10)	23 (0.91)	6 (0.24)	26 (1.02)	6 (0.24)	134 (5.28)	233 (9.17)	M5
B	102 (4.02)	102 (4.02)	16 (0.63)	3 (0.12)	282 (11.10)	23 (0.91)	6 (0.24)	26 (1.02)	6 (0.24)	134 (5.28)	233 (9.17)	M5
C	140 (5.51)	140 (5.51)	17 (0.67)	3 (0.12)	318 (12.52)	23.5 (0.93)	5 (0.20)	24.5 (0.97)	6 (0.24)	174 (6.85)	270 (10.63)	M5
D	192 (7.56)	192 (7.56)	11 (0.43)	3 (0.12)	371 (14.61)	27 (1.06)	7 (0.28)	25 (0.98)	6 (0.24)	214 (8.43)	319 (12.56)	M6
E	192 (7.56)	192 (7.56)	11 (0.43)	3 (0.12)	371 (14.61)	27 (1.06)	7 (0.28)	25 (0.98)	6 (0.24)	214 (8.43)	319 (12.56)	M6
F	195 (7.68)	204 (8.03)	14.5 (0.57)	8 (0.32)	385 (15.16)	19.5 (0.77)	7.5 (0.30)	19.5 (0.77)	7.5 (0.30)	224 (8.82)	346 (13.62)	M6
G	170 (6.69)	210 (8.27)	34.5 (1.36)	8 (0.32)	436 (17.17)	20 (0.79)	8 (0.32)	20 (0.79)	6 (0.24)	239 (9.41)	396 (15.59)	M6
H	190 (7.48)	220 (8.66)	29 (1.14)	8 (0.32)	527 (20.75)	19.5 (0.77)	8.5 (0.34)	20.5 (0.81)	7.5 (0.30)	248 (9.76)	487 (19.17)	M8

Model Group	Dimensions mm (in)											
	W1	W2	W3	W4 *1	H1	H2 *1	H3 *1	H4 *1	H5 *1	A	B	d1
I	218 (8.58)	263 (10.35)	39 (1.54)	8 (0.32)	675 (26.56)	33 (1.30)	12 (0.47)	32 (1.26)	13 (0.51)	296 (11.65)	610 (24.02)	M10
J	370 (14.57)	310 (12.20)	23 (0.91)	12 (0.47)	773 (30.43)	31.5 (1.24)	14 (0.55)	31.5 (1.24)	13 (0.51)	416 (16.38)	710 (27.95)	M12

*1 Dimensions of the gasket. Make sure that the gasket is larger than the specified dimension.

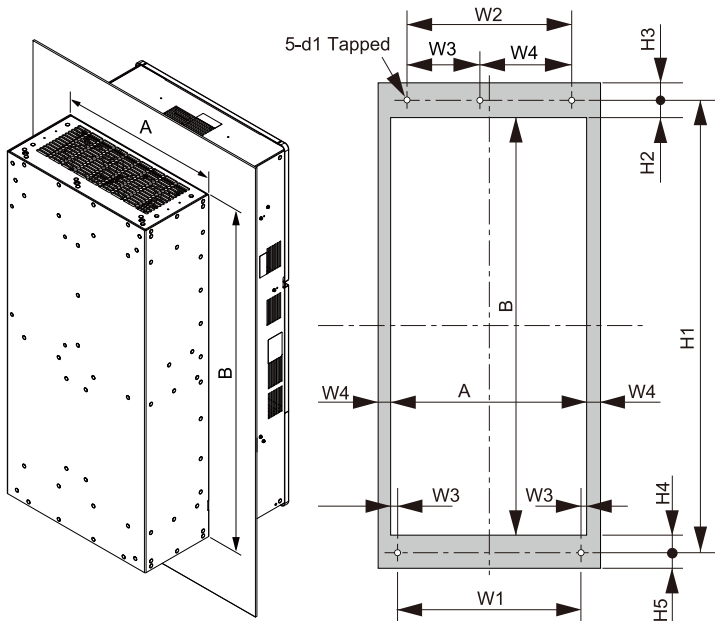


Figure 5.4 Panel Cut-Out Dimensions

Table 5.4 Panel Cut-Out Dimensions

Model Group	Dimensions mm (in)													
	W1	W2	W3	W4 *1	W5	W6	H1	H2 *1	H3 *1	H4 *1	H5 *1	A	B	d1
K	450 (17.72)	404 (15.91)	18 (0.71)	12 (0.47)	179 (7.05)	225 (8.86)	1110 (43.70)	34 (1.34)	15 (0.59)	34 (1.34)	15 (0.59)	486 (19.13)	1042 (41.02)	M12

*1 Dimensions of the gasket. Make sure that the gasket is larger than the specified dimension.

◆ Kit Models and Installation Procedure

⚠ 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.

⚠ WARNING Crush Hazard. Before you hang the drive vertically, use screws to correctly attach the drive front cover and other drive components. If you do not secure the front cover, it can fall and cause minor injury.

⚠ WARNING Crush Hazard. When you use a crane or hoist to lift the drive during installation or removal, prevent more than 1.96 m/s² (0.2 G) vibration or impact. Too much vibration or impact can cause serious injury or death from falling equipment.

⚠ WARNING Crush Hazard. When you lift the drive during installation or removal, do not try to turn the drive over and do not ignore the hanging drive. If you move a hanging drive too much or if you ignore it, the drive can fall and cause serious injury or death.

The installation procedure is different for different drive models. Refer to [Table 5.5](#).

Table 5.5 Kit and Installation Method

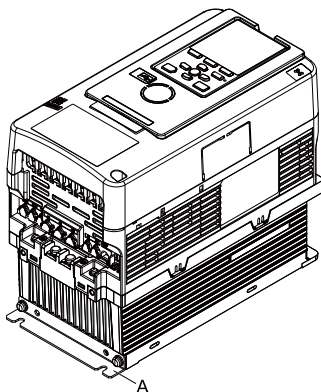
Drive Model		Kit Model	Installation Procedure	Reference
GA700 GA800	2004, 2006, 2008, 2010, 2012, 2018, 2021, 2030, 2042 4002, 4004, 4005, 4007, 4009, 4012, 4018, 4023	900-193-209-001	Procedure A	15
	2056 4031, 4038	900-193-209-002		
	2070, 2082 4044, 4060	900-193-209-003		
	2110, 2138, 2169, 2211, 2257, 2313, 2360, 2415 4075, 4089, 4103, 4140, 4168, 4208, 4250 4296, 4302, 4371, 4389, 4414	*1	Procedure B	17
	4453, 4477, 4568, 4605, 4675, 4720 5382, 5412, 5472		Procedure C	19
CH700 CR700	2003, 2005, 2007, 2008, 2011, 2014, 2018, 2025, 2033 4002, 4003, 4005, 4006, 4007, 4009, 4015, 4018	900-193-209-001	Procedure A	15
	2045 4024, 4031	900-193-209-002		
	2060, 2075 4039, 4045	900-193-209-003		
	2088, 2115, 2145, 2180, 2215, 2283, 2346, 2415 4060, 4075, 4091, 4112, 4150, 4180, 4216, 4260, 4304, 4371	*1	Procedure B	17
	4414, 4543, 4605		Procedure C	19

*1 Use the mounting bracket supplied with the drive.

■ Use the External Heatsink Installation Kit (Procedure A)

Cut an opening in the enclosure panel before you install the kit. Refer to [Panel Cut-Out Dimensions on page 12](#) for more information.

1. Remove the mounting bracket from the bottom of the drive.



A - Mounting bracket

Figure 5.5 Remove the Mounting Bracket

2. Install the mounting bracket in the position shown in [Figure 5.6](#).
Tighten the screws to a correct tightening torque:
 - M5 × 14 pan head screws: 1.96 N·m to 2.53 N·m (17.35 in·lb to 22.39 in·lb)
 - M6 × 14 pan head screws: 3.92 N·m to 4.90 N·m (34.70 in·lb to 43.37 in·lb)

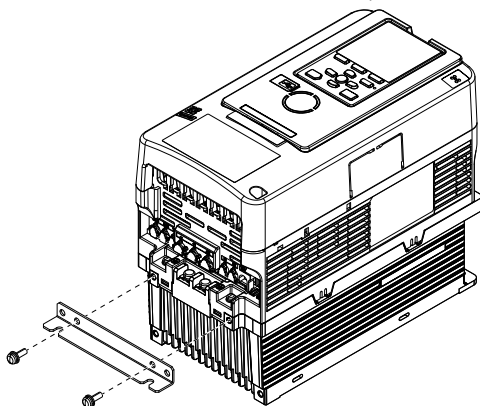


Figure 5.6 Attach the Mounting Bracket

3. Use the screws supplied in the kit to install the attachment in the position shown in [Figure 5.7](#).
Tighten the screws to a correct tightening torque:
 - M5 × 14 pan head screws: 1.96 N·m to 2.53 N·m (17.35 in·lb to 22.39 in·lb)
 - M6 × 14 pan head screws: 3.92 N·m to 4.90 N·m (34.70 in·lb to 43.37 in·lb)

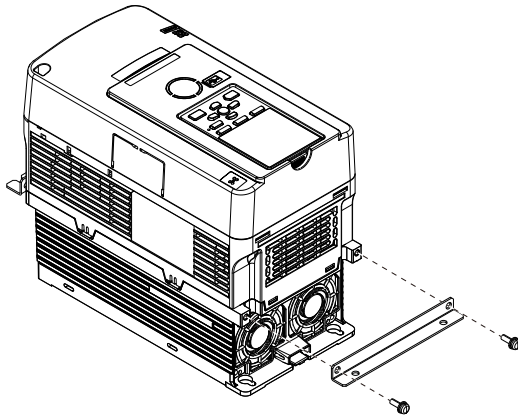


Figure 5.7 Install the Attachment

4. Install the drive in the cut opening of the enclosure panel and use screws to safety it to the enclosure panel.

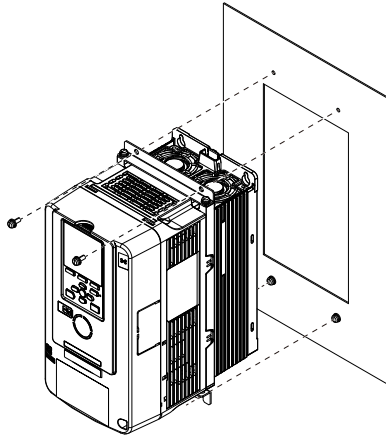
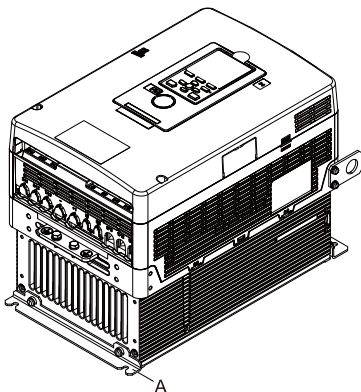


Figure 5.8 Install the Drive into the Opening of the Enclosure Panel

■ Use the Mounting Bracket Supplied with the Drive (Procedure B)

Cut an opening in the enclosure panel before you install the kit. Refer to *Panel Cut-Out Dimensions on page 12* for more information.

1. Remove the mounting bracket from the bottom of the drive.



A - Mounting bracket

Figure 5.9 Remove the Mounting Bracket

2. Install the mounting bracket in the position shown in [Figure 5.10](#).

Tighten the screws to a correct tightening torque:

- M6 × 14 pan head screws: 3.92 N·m to 4.90 N·m (34.70 in·lb to 43.37 in·lb)
- M6 × 16 hex bolts: 3.92 N·m to 4.90 N·m (34.70 in·lb to 43.37 in·lb)
- M8 × 16 hex bolts: 8.83 N·m to 10.79 N·m (78.15 in·lb to 95.49 in·lb)
- M10 × 20 hex bolts: 17.65 N·m to 22.56 N·m (156.22 in·lb to 199.67 in·lb)
- M12 × 30 hex bolts: 31.38 N·m to 39.23 N·m (277.74 in·lb to 347.21 in·lb)

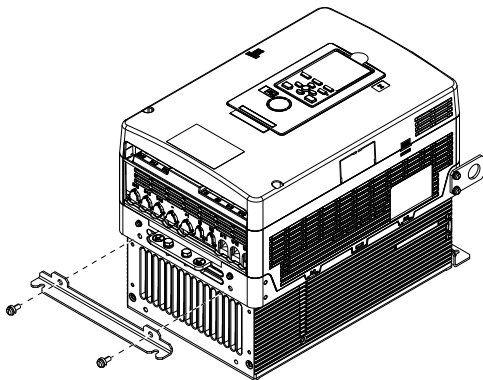
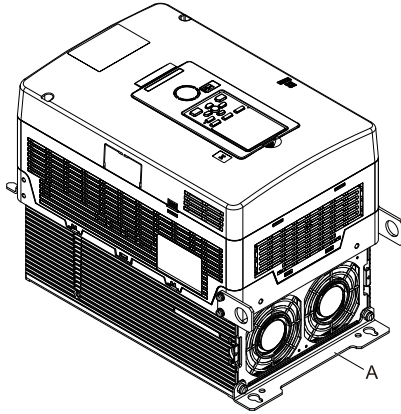


Figure 5.10 Attach the Mounting Bracket

3. Remove the mounting bracket from the top of the drive.



A - Mounting bracket

Figure 5.11 Remove the Mounting Bracket

4. Change the position of the mounting bracket and install it in the position shown in [Figure 5.12](#).

Tighten the screws to a correct tightening torque:

- M6 × 14 pan head screws: 3.92 N·m to 4.90 N·m (34.70 in·lb to 43.37 in·lb)
- M6 × 16 hex bolts: 3.92 N·m to 4.90 N·m (34.70 in·lb to 43.37 in·lb)
- M8 × 16 hex bolts: 8.83 N·m to 10.79 N·m (78.15 in·lb to 95.49 in·lb)
- M10 × 20 hex bolts: 17.65 N·m to 22.56 N·m (156.22 in·lb to 199.67 in·lb)
- M12 × 30 hex bolts: 31.38 N·m to 39.23 N·m (277.74 in·lb to 347.21 in·lb)

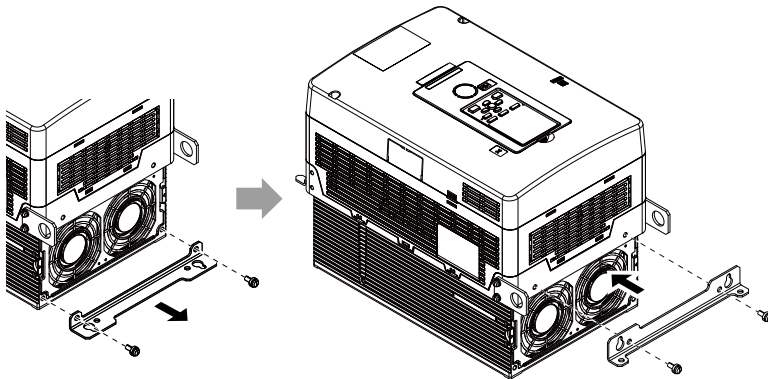


Figure 5.12 Attach the Mounting Bracket

5. Install the drive in the cut opening of the enclosure panel and use screws to safety it to the enclosure panel.

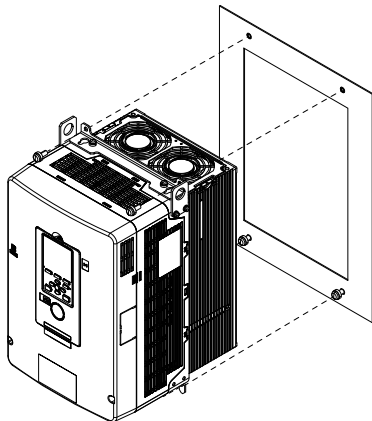
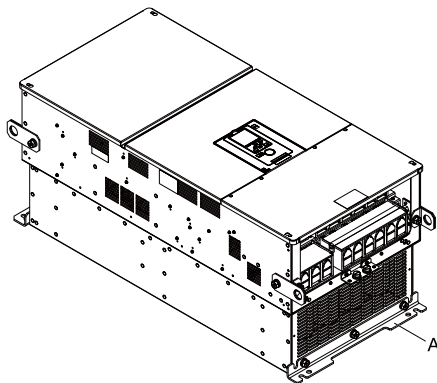


Figure 5.13 Install the Drive into the Opening of the Enclosure Panel

■ **Use the Mounting Bracket Supplied with the Drive (Procedure C)**

Cut an opening in the enclosure panel before you install the kit. Refer to *Panel Cut-Out Dimensions on page 12* for more information.

1. Remove the mounting bracket from the bottom of the drive.



A - Mounting bracket

Figure 5.14 Remove the Mounting Bracket

2. Change the position of the mounting bracket and install it in the position shown in [Figure 5.15](#).

Tighten the screws to a tightening torque of 31.38 N·m to 39.23 N·m (277.74 in·lb to 347.21 in·lb).

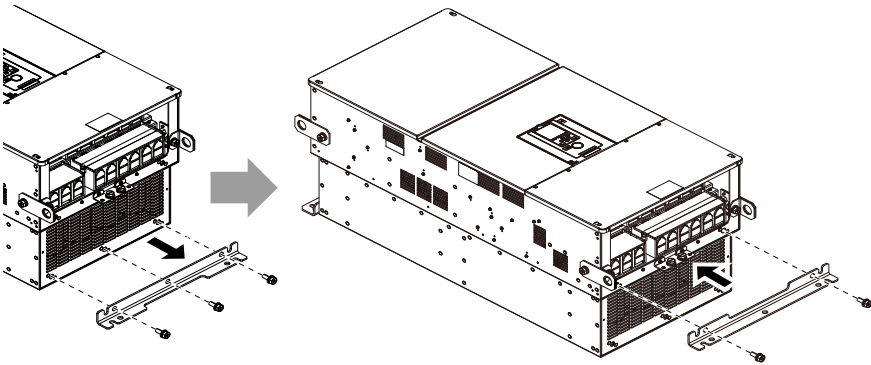
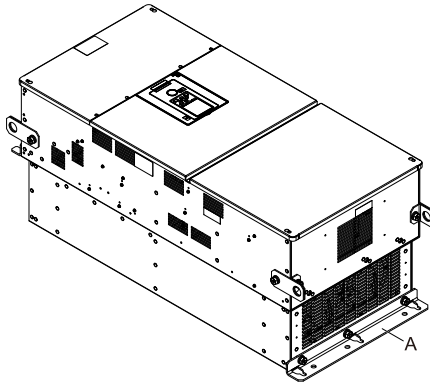


Figure 5.15 Attach the Mounting Bracket

3. Remove the mounting bracket from the top of the drive.



A - Mounting bracket

Figure 5.16 Remove the Mounting Bracket

4. Change the position of the mounting bracket and install it in the position shown in [Figure 5.17](#).

Tighten the screws to a tightening torque of 31.38 N·m to 39.23 N·m (277.74 in·lb to 347.21 in·lb).

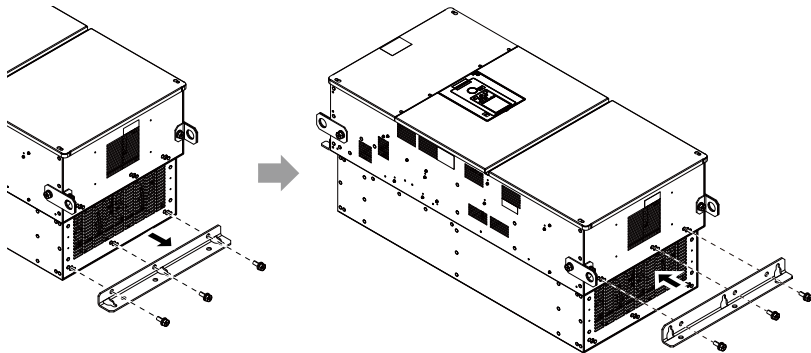


Figure 5.17 Attach the Mounting Bracket

5. Install the drive in the cut opening of the enclosure panel and use screws to safety it to the enclosure panel.

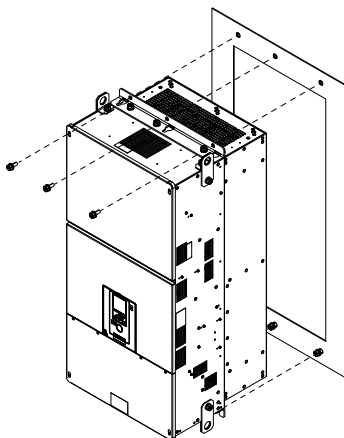


Figure 5.18 Install the Drive into the Opening of the Enclosure Panel

◆ Gasket and Sealant

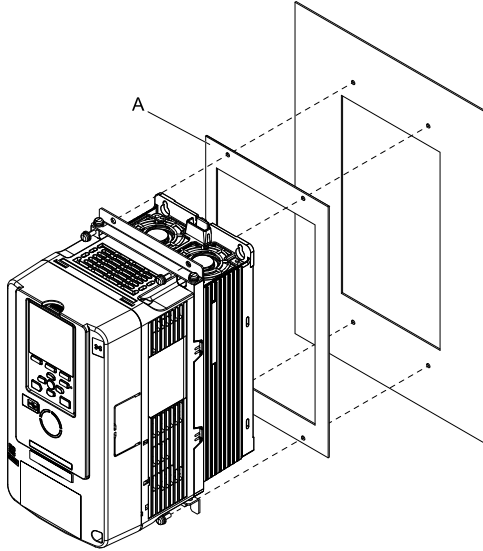
If the environment around the heatsink does not meet the recommendations for the drive installation environment, install a gasket or apply sealant as shown in [Figure 5.19](#) and [Figure 5.20](#). Make sure that the drive is safe from unsatisfactory environmental conditions.

Use a gasket that is approximately 2 mm (0.08 in) thick and made from CR or an EPDM-based rubber sponge.

Yaskawa recommends these products:

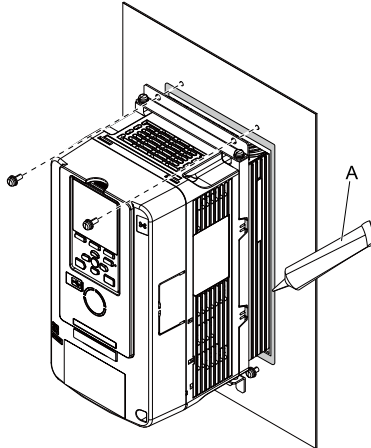
- Gasket: INOAC CORPORATION C-4205
- Sealant: Shin-Etsu Silicone KE-3494 from Shin-Etsu Chemical Co., Ltd.

Refer to [Panel Cut-Out Dimensions on page 12](#) for the gasket dimensions.



A - Gasket

Figure 5.19 Install a Gasket



A - Sealant

Figure 5.20 Apply Sealant

Revision History

Date of Publication	Revision Number	Section	Revised Content
August 2020	2	5	Addition: GA800 600 V class drives and corresponding data. GA800 Three-Phase 600 V: CIPR-GA80U5382 to 5472
January 2020	1	-	Revision: Format size changed.
		Back Cover	Revision: Address
August 2018	-	-	First Edition

YASKAWA AC Drive Option External Heatsink Installation Kit Instruction Manual

DRIVE CENTER (INVERTER PLANT)

2-13-1, Nishimiyaichi, Yukuhashi, Fukuoka, 824-8511, Japan
Phone: +81-930-25-2548 Fax: +81-930-25-3431
www.yaskawa.co.jp

YASKAWA ELECTRIC CORPORATION

New Pier Takeshiba South Tower, 1-16-1, Kaigan, Minatoku, Tokyo, 105-6891, Japan
Phone: +81-3-5402-4502 Fax: +81-3-5402-4580
www.yaskawa.co.jp

YASKAWA AMERICA, INC.

2121, Norman Drive South, Waukegan, IL 60085, U.S.A.
Phone: +1-800-YASKAWA (927-5292) or +1-847-887-7000 Fax: +1-847-887-7310
www.yaskawa.com

YASKAWA ELÉTRICO DO BRASIL LTDA.

777, Avenida Piraporinha, Diadema, São Paulo, 09950-000, Brasil
Phone: +55-11-3585-1100 Fax: +55-11-3585-1187
www.yaskawa.com.br

YASKAWA EUROPE GmbH

Hauptstrajle 185, 65760 Eschborn, Germany
Phone: +49-6196-569-300 Fax: +49-6196-569-398
E-mail: info@yaskawa.eu.com
www.yaskawa.eu.com

YASKAWA ELECTRIC KOREA CORPORATION

35F, Three IFC, 10 Gukjegeumyung-ro, Yeongdeungpo-gu, Seoul, 07326, Korea
Phone: +82-2-784-7844 Fax: +82-2-784-8495
www.yaskawa.co.kr

YASKAWA ASIA PACIFIC PTE. LTD

30A, Kallang Place, #06-01, 339213, Singapore
Phone: +65-6282-3003 Fax: +65-6289-3003
www.yaskawa.com.sg

YASKAWA ELECTRIC (THAILAND) CO., LTD.

59, 1F-5F, Flourish Building, Soi Ratchadapisek 18, Ratchadapisek Road, Huaykwang, Bangkok, 10310, Thailand
Phone: +66-2-017-0099 Fax: +66-2-017-0799
www.yaskawa.co.th

YASKAWA ELECTRIC (CHINA) CO., LTD.

22F, Link Square 1, No.222, Hubin Road, Shanghai, 200021, China
Phone: +86-21-5385-2200 Fax: +86-21-5385-3299
www.yaskawa.com.cn

YASKAWA ELECTRIC (CHINA) CO., LTD. BEIJING OFFICE

Room 1011, Tower W3 Oriental Plaza, No. 1, East Chang An Avenue,
Dong Cheng District, Beijing, 100738, China
Phone: +86-10-8518-4086 Fax: +86-10-8518-4082

YASKAWA ELECTRIC TAIWAN CORPORATION

12F, No. 207, Section 3, Beishin Road, Shindian District, New Taipei City 23143, Taiwan
Phone: +886-2-8913-1333 Fax: +886-2-8913-1513 or +886-2-8913-1519
www.yaskawa.com.tw

YASKAWA INDIA PRIVATE LIMITED

#17/A, Electronics City, Hosur Road, Bengaluru, 560 100 (Karnataka), India
Phone: +91-80-4244-1900 Fax: +91-80-4244-1901
www.yaskawaindia.in

YASKAWA

YASKAWA ELECTRIC CORPORATION

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.

© 2018 YASKAWA Electric Corporation



TOEPC7206003

MANUAL NO. TOEP C720600 03C <2>-0
Published in Japan August 2020
20-2-22
Original instructions.