

Installation Instructions

Adapter Plate

D1h-D4h (FC Series FC 102, FC 202, and FC 302)

1.1 Description

The adapter plate kit is designed for the VLT® HVAC Drive FC 102, VLT® AQUA Drive FC 202, and VLT® AutomationDrive FC 302 D1h/D3h and D2h/D4h frequency converters and works for both the IP20 cabinet-mounted units and the IP21/IP54 wall-mounted units. The adapter plate allows an old D1/D3 or D2/D4 to be replaced with a new D1h/D3h or D2h/D4h without any modifications to the mounting structure.

The kit contains the following parts:

- Adapter plate (1)
- M10 nuts (4)

1.2 Kit Part Numbers

Part number	Kit description
176F3409	D1h/D3h
176F3410	D2h/D4h

Table 1.1 Part Numbers for all the Adapter Plate Kits

1.3 Preparing for Installation

WARNING

DISCHARGE TIME

The frequency converter contains DC-link capacitors, which can remain charged even when the frequency converter is not powered. Failure to wait the specified time after power has been removed before performing service or repair work, could result in death or serious injury.

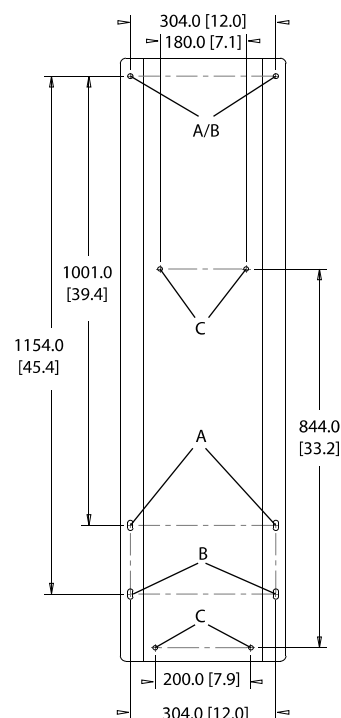
1. Stop motor.
2. Disconnect AC mains, permanent magnet type motors, and remote DC-link power supplies, including battery back-ups, UPS, and DC-link connections to other frequency converters.
3. Wait for the capacitors to discharge fully, before performing any service or repair work. The duration of waiting time is specified in *Table 1.2*.
4. Remove frequency converter from the wall or panel.

Voltage [V]	Power range [kW]	Minimum waiting time (min)
3x400	90–250	20
3x400	110–315	20
3x500	110–315	20
3x500	132–355	20
3x525	75–250	20
3x525	90–315	20
3x690	90–250	20
3x690	110–315	20

Table 1.2 Discharge Time

1.4 Installation

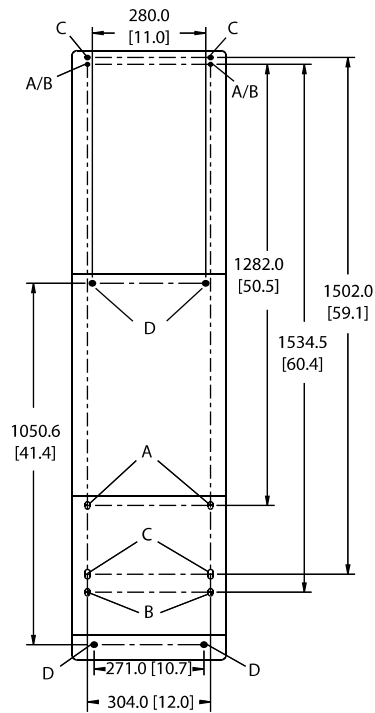
1. Using the mounting holes and bolts from the old frequency converter, securely fasten the adapter plate. Torque bolts to their recommended setting. Refer to *Illustration 1.1* — *Illustration 1.2*.



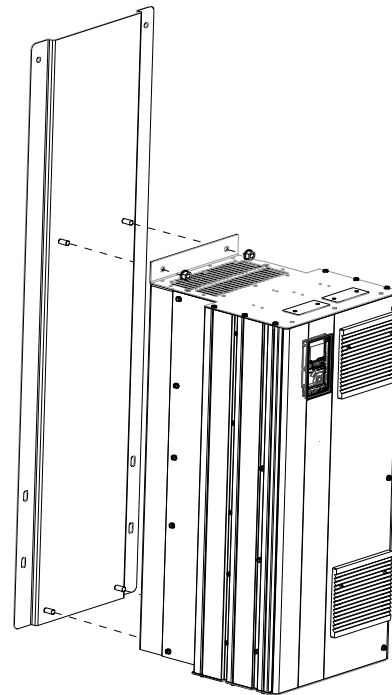
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A	Mounting holes for old D3 IP00 unit
B	Mounting holes for old D1 IP21 or IP54 unit
C	Threaded studs for mounting new D1h/D3h unit

Illustration 1.1 Mounting Locations for D1h/D3h Adapter Plate.



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Illustration 1.3 Installing D1h/D3h Unit to Adapter Plate

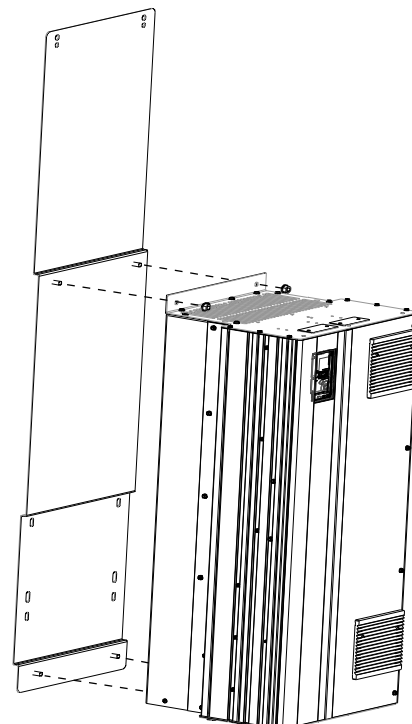
A	Mounting holes for old D4 IP00 unit
B	Mounting holes for old D2 IP21 or IP54 unit
C	Mounting holes for old E2 IP00 unit
D	Threaded studs to mount new D2h/D4h unit

Illustration 1.2 Mounting Locations for D2h/D4h Adapter Plate

- Slightly lean the top of the frequency converter forward and set the base of the frequency converter on the lower 2 threaded studs on the adapter plate.
- Slowly push the top of the frequency converter back towards the adapter plate until the top 2 threaded studs line up with the 2 mounting holes on the top of the unit. Secure the frequency converter to the plate with the 4 nuts included in the kit. Torque to 19 N-m [170 in-lb]. Refer to *Illustration 1.3* — *Illustration 1.4*
- Reconnect the wiring. For additional set-up information, refer to the Operating Instructions.

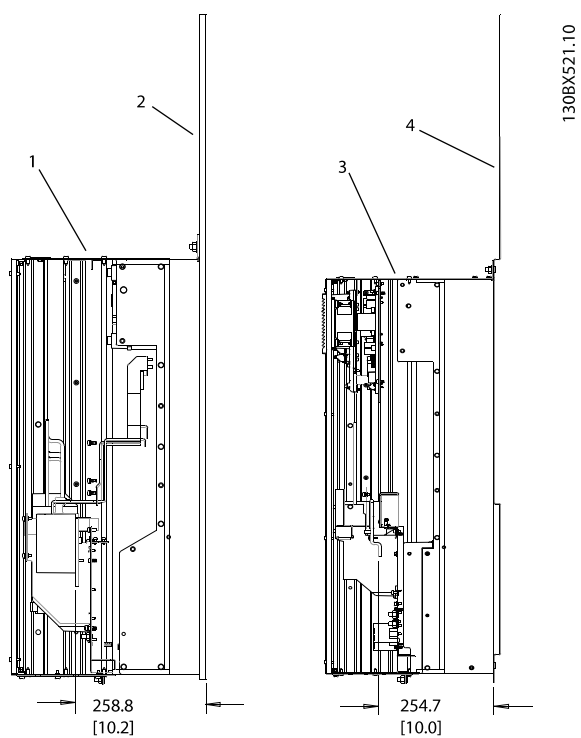
NOTICE

Since the distance from the mains and motor terminals to the mounting surface has changed, some cable bending may be required. See *Illustration 1.5*



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Illustration 1.4 Installing D2h/D4h Unit to Adapter Plate



1	D1h/D3h frequency converter.
2	D1h/D3h adapter plate
3	D2h/D4h frequency converter
4	D2h/D4h adapter plate
Distance to terminals on old D2/D4 frequency converter: mains - 261 mm [10.3 in] and motor - 120 mm [4.7 in].	
Distance to terminals on old E2 frequency converter: mains - 370 mm [14.6 in] and motor - 154 mm [6.1 in].	

Illustration 1.5 Distance from Mounting Surface to Mains/Motor Terminals

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