

Spare Parts Selection Guide - Revision C.4

# Danfoss Turbocor® VTT and VTX Series Centrifugal Compressors

VT Series Compressors



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**List of Changes**

<b>Revision</b>	<b>Date</b>	<b>Page</b>	<b>Description of Change</b>
C.2	3-09-2021	Pages: 31, 48-52, and 57	Updated/added various kits
C.3	4-7-2022	Chapter 4	Added Cooling Exit Temperature Sensor kit
		53	Obsoleted 110082
C.3	4-7-2022	117	Obsoleted 110110
C.4	6/13/2022	44	Obsoleted 110109

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## Chapter 1.0 Introduction

### 1.1 PDF Navigation

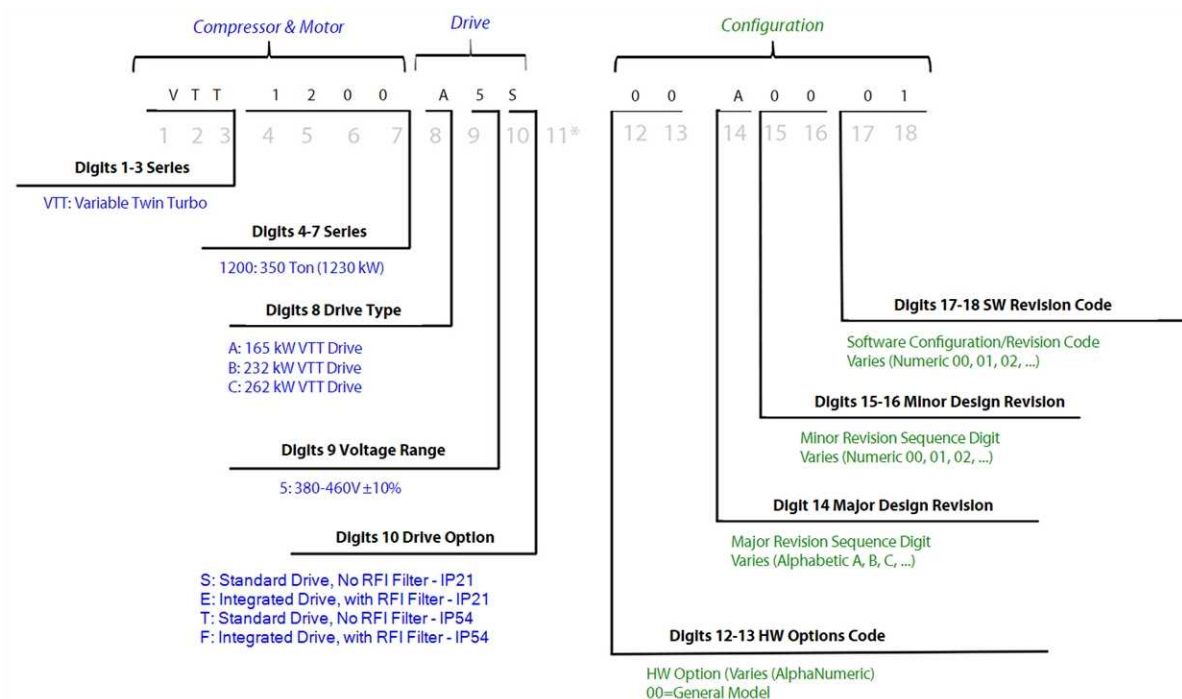
This document contains PDF hyperlinks for easy navigation. Clicking on items in the table of contents will take you to the page it references. Throughout the manual there is blue hyperlink text. Clicking on blue text will take you to the page or section it references in this document.

### 1.2 Document Symbols

Some tables contain gray rows, as depicted below. This is used to indicate secondary spare part kits. These kits will not replace the entire assembly, but only a piece, which is detailed in the comment column.

DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- ASSEMBLY	xxxxxx	X	Includes all required fasteners and O-rings
KIT- O-RING	xxxxxx	X	O-ring only

Figure 1-1 VTT Compressor Portion Nomenclature Revision A and B



\* For New Compressors, digit 11 is a hyphen "-". For Refurbished compressors, digit 11 is an "X".

Figure 1-2 VTT Compressor Revision C / VTX Compressor Rev A Portion Nomenclature

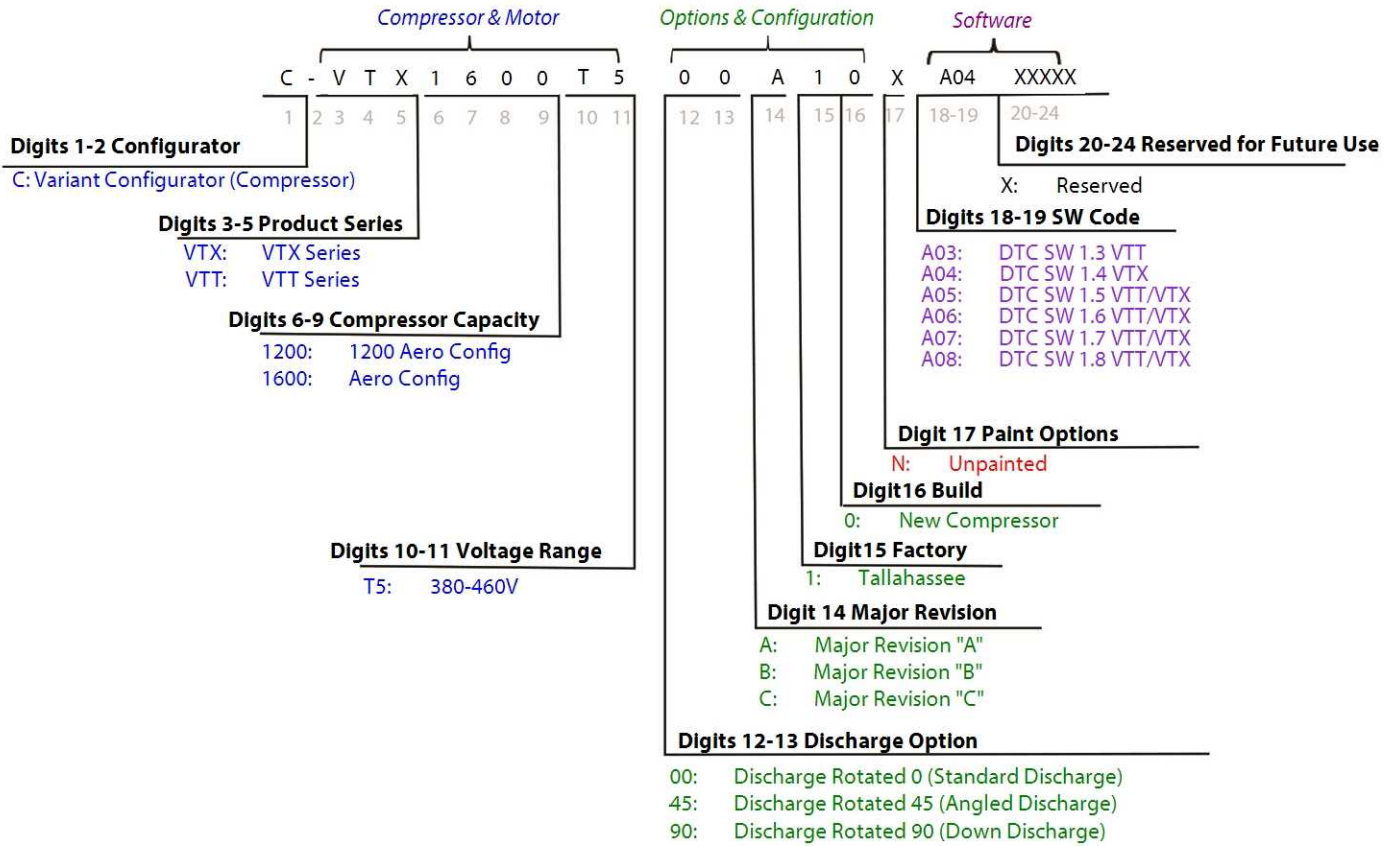


Figure 1-3 VTT/VTX Drive Portion Nomenclature Revision C

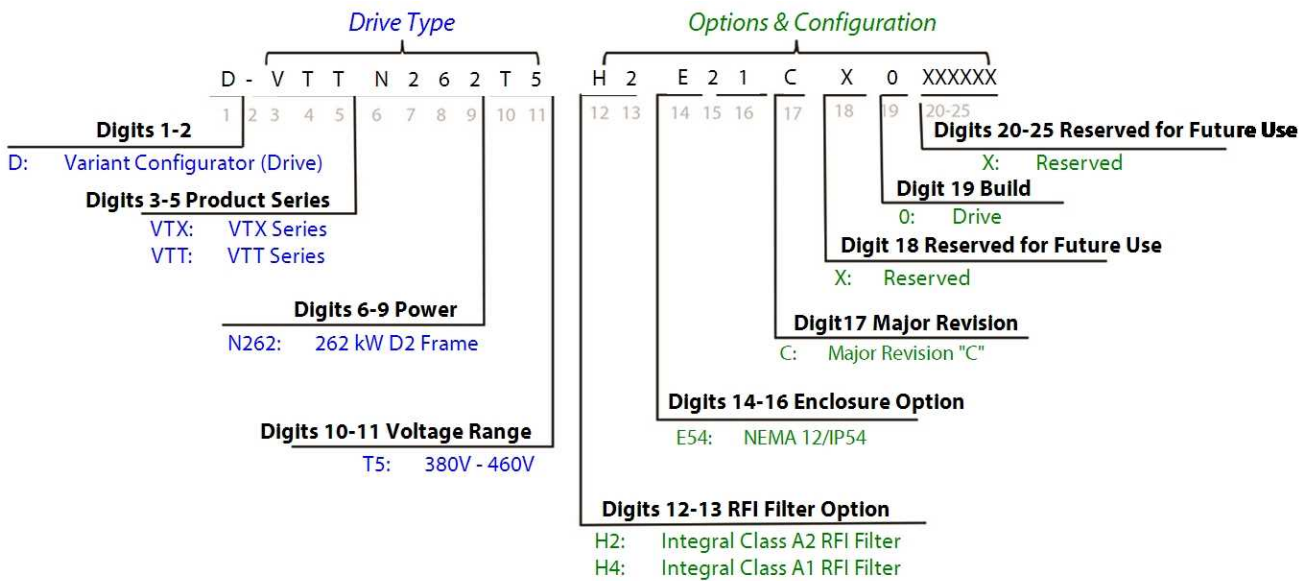
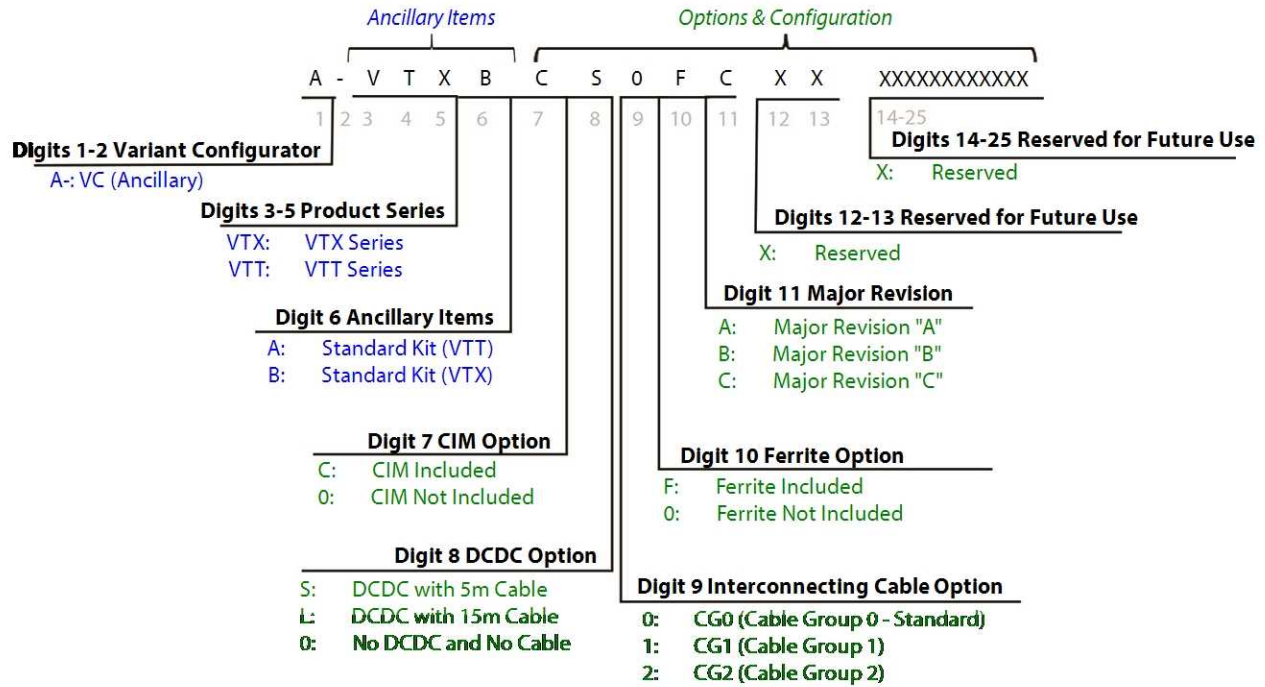


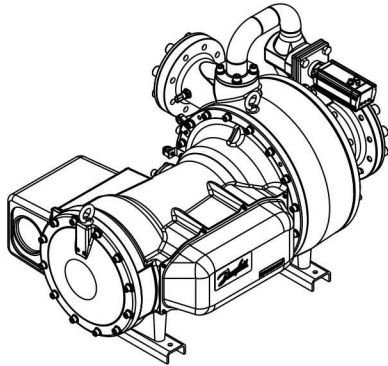
Figure 1-4 VTT/VTX Ancillary and Accessory Items Nomenclature Revision C



### 1.3 Organization of this Manual

This manual details the spare parts available to order for the VTX Series Turbocor® Compressor. It is organized into four sections corresponding to the main components of the product, as pictured below. The compressor module section is divided into more specific segments detailing the spare parts available for outer components, service-side components, and power-side components.

Each section has a title page which includes a labeled diagram of the elements available as spare part kits in that section. All of the components with available spare parts are listed on their own page along with illustrations and related spare part kits differentiated by major revision. Please refer to the VTT/VTX Product Nomenclature to identify which major revision your product falls under.



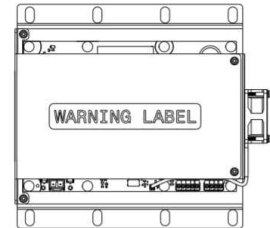
Chapter 2.0 VTT/VTX Compressor Module Components



Chapter 3.0 VFD Components



Chapter 4.0 External Modules/Components



## Chapter 2.0 VTT/VTX Compressor Module Components

### 2.1 External Components

This section focuses on the spare part kits that are visible on the outside of the compressor module and the related O-ring replacement kits.

#### VTT Compressor Module

Figure 2-1 VTT Service Side Kits

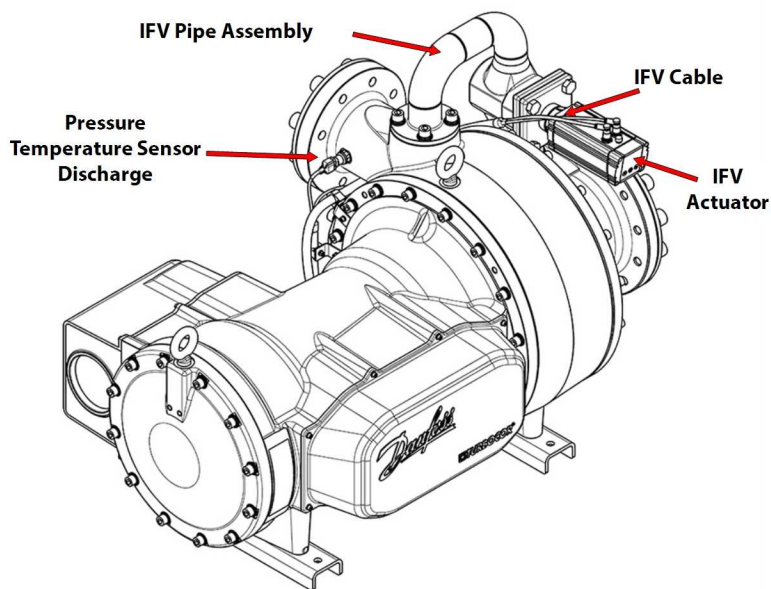
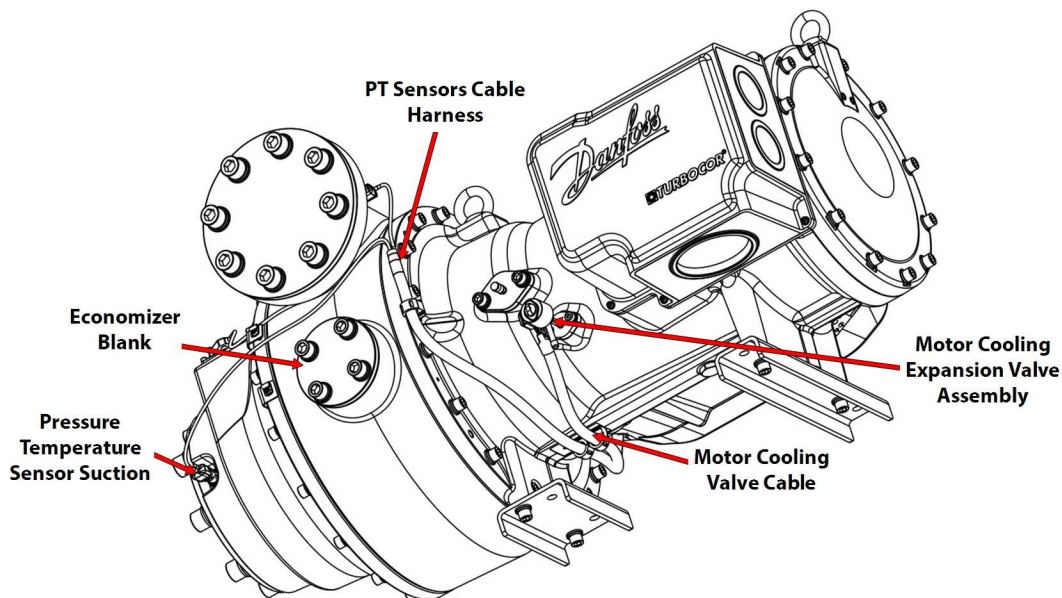


Figure 2-2 VTT Power Side Kits



## VTX Compressor Module

Figure 2-3 VTX Service Side Kits

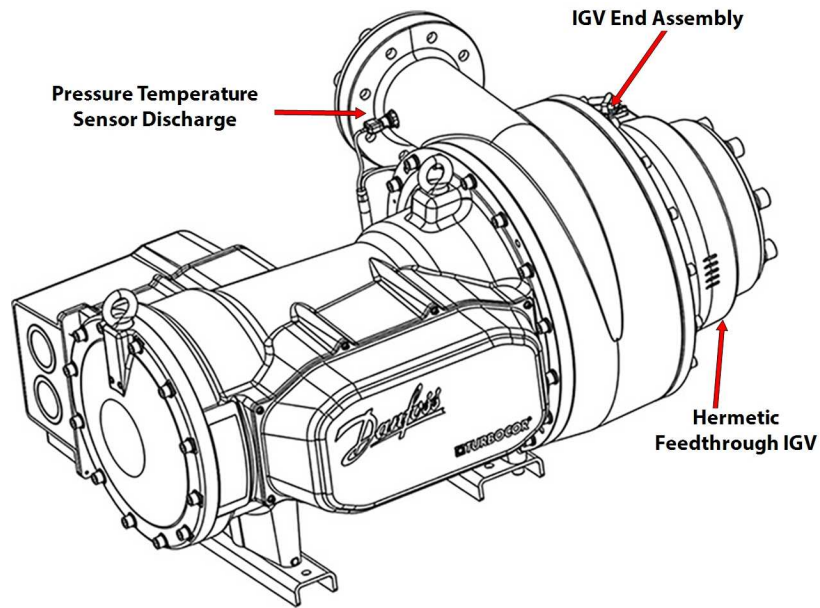
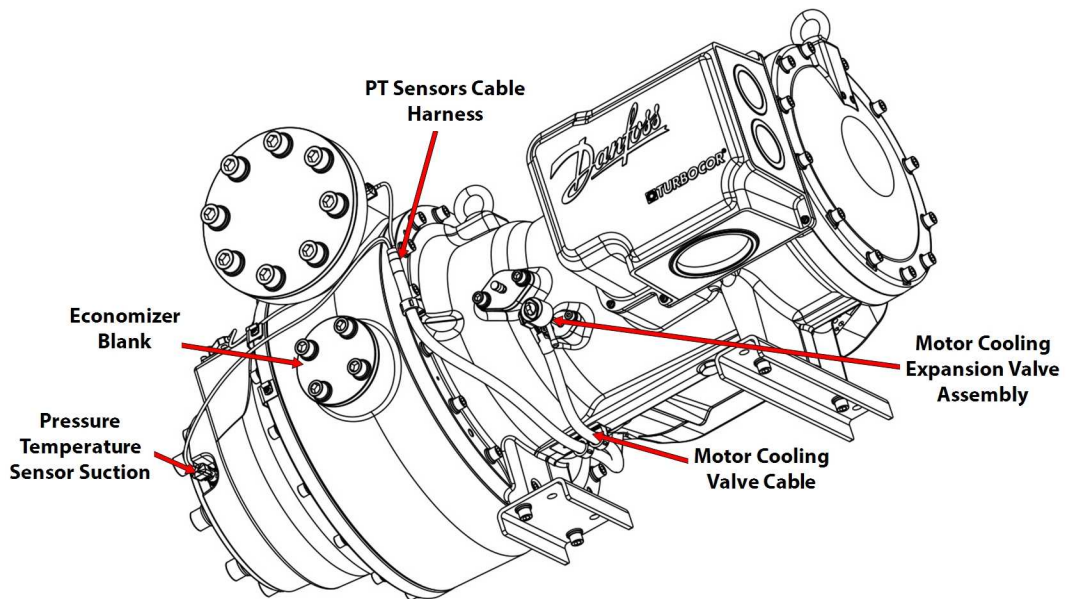


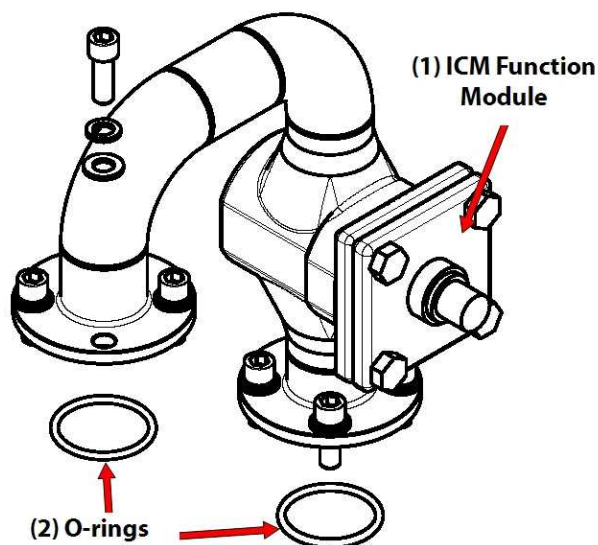
Figure 2-4 VTX Service Side Kits





### 2.1.1 IFV Pipe Assembly

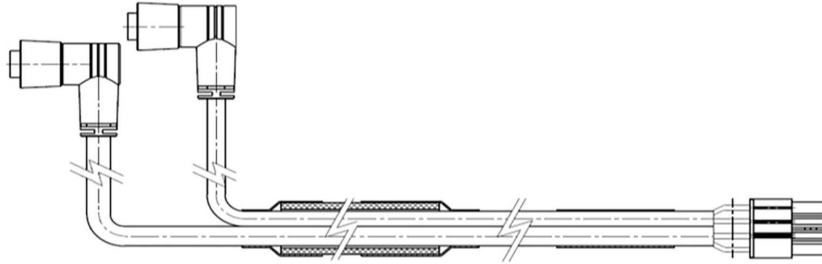
The IntraFlow™ valve (IFV) directs a small fraction of the flow from the second stage volute exit to the inlet of the first stage diffuser through the IFV Pipe.



APPLIES TO: VTT1200 ONLY			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- IFV PIPE ASSY	110066	All	Includes fasteners and O-rings required to replace IFV assembly
(1) KIT- IFV ICM FUNCTION MODULE	110067	All	Includes ICM function module only
(2) KIT- O-RING INTRAFLOW VALVE	110073	All	Includes fasteners and O-rings required to replace IFV assembly

### 2.1.2 IFV Cable

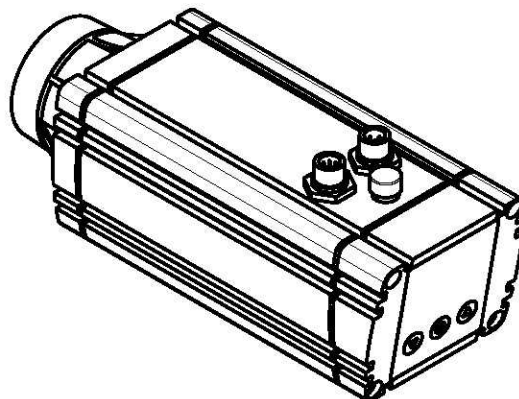
The IFV Cable provides a connection for power and communication between the Compressor Control Module (CCM) and the IFV.



APPLIES TO: VTT1200 ONLY			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- CABLE IFV	110063	All	Cable only

### 2.1.3 IFV Actuator

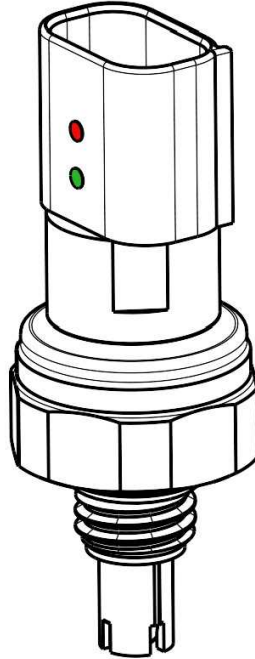
The IFV Actuator ICAD 1200A controls the IFV position based on signals from the CCM.



APPLIES TO: VTT1200 ONLY			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT-IFV ACTUATOR	110072	All	Actuator Only

### 2.1.4 Pressure - Temperature Sensor Discharge

This High Pressure/ Temperature Sensor is used to signal the operating pressure and temperature at the discharge port to the CCM. These values are used to calculate pressure ratios and saturated temperatures.

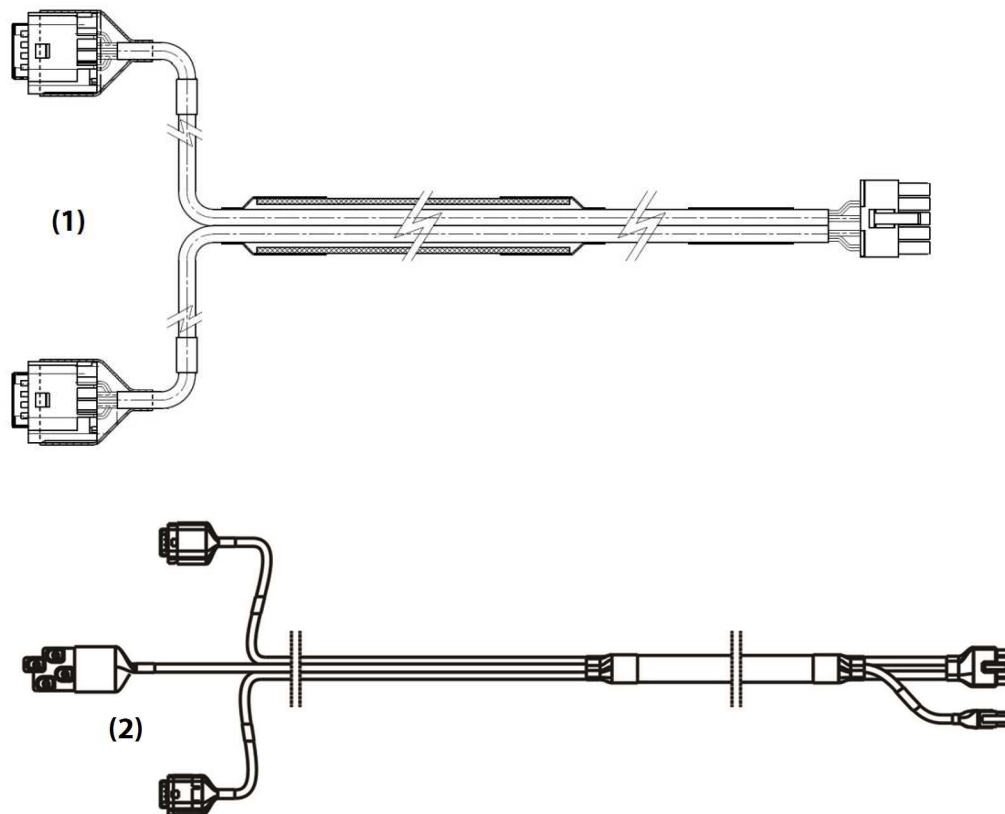


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- SENSOR PRESS/TEMP DISCHARGE	110080	All	Includes sensor with O-ring, marked red

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- SENSOR PRESS/TEMP DISCHARGE	110080	All	Includes sensor with O-ring, marked red

## 2.1.5 PT Sensors Cable Harness

The Pressure/Temperature (PT) Sensors Cable Harness connects the combination pressure/ temperature sensors to the CCM. The VTX Compressor harness also includes the connector for the IGV.

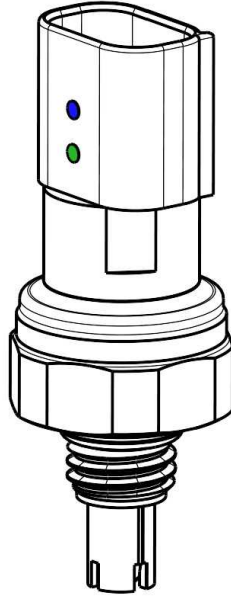


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT-CABLE HARNESS P/T SENSORS	110064	All	Cable only

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT-CABLE HARNESS P/T SENSORS	112035	All	Cable only

### 2.1.6 Pressure - Temperature Sensor Suction

The Low Pressure/Temperature Sensor is used to signal the operating pressure and temperature at the suction ports to the CCM. These values are used to calculate pressure ratios and saturated temperatures.

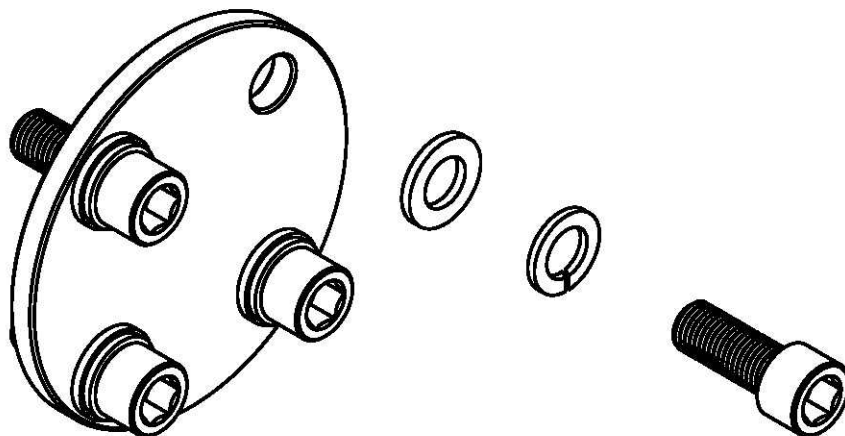


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- SENSOR PRESS/TEMP SUCTION	110081	All	Includes sensor with O-ring, marked blue

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- SENSOR PRESS/TEMP SUCTION	110081	All	Includes sensor with O-ring, marked blue

### 2.1.7 Economizer Blank

The Economizer Blank covers the economizer port when the economizer option is not utilized on the compressor.

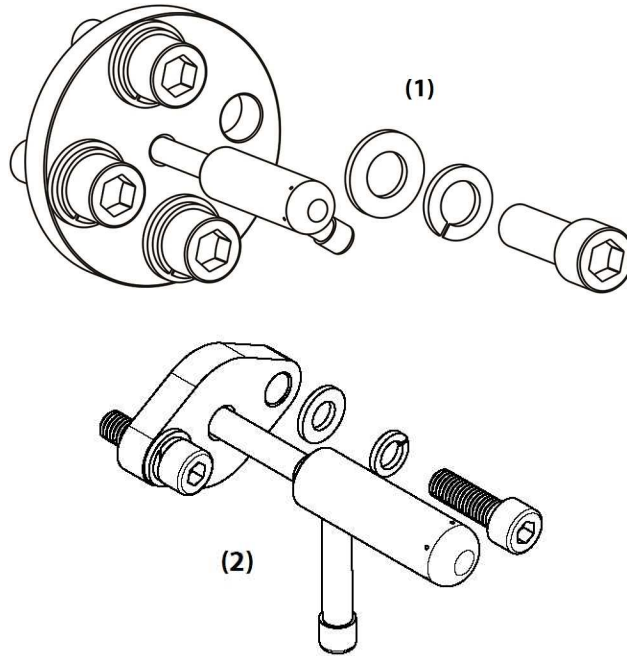


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- ECONOMIZER BLANK	110092	All	Includes all required fasteners and O-ring
KIT- O-RING ECONOMIZER	110079	All	Includes all required fasteners and O-ring

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- ECONOMIZER BLANK	110092	All	Includes all required fasteners and O-ring
KIT- O-RING ECONOMIZER	110079	All	Includes all required fasteners and O-ring

### 2.1.8 Motor Cooling Expansion Valve Assembly

The Motor Cooling Expansion Valve controls the flow of refrigerant to cool the compressor motor and bearing sections.



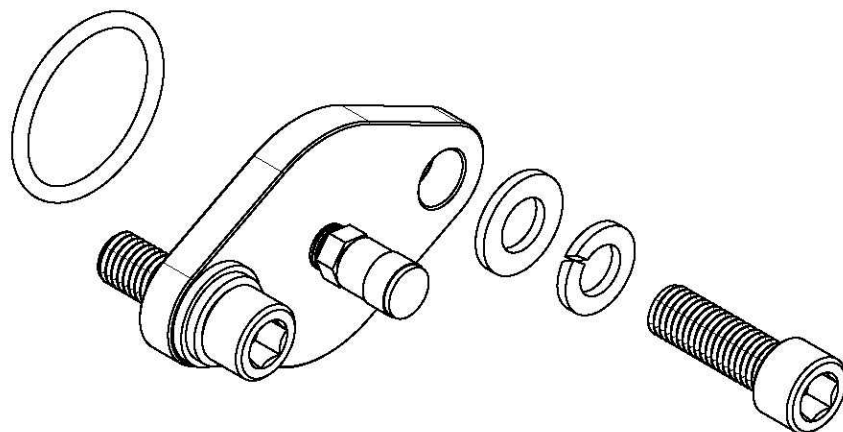
APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT- MOTOR COOLING VALVE ASSY	110055	A	Includes all required fasteners and O-ring
(2) KIT- MOTOR COOLING VALVE ASSY	110096	B & later	Includes all required fasteners and O-ring
KIT- O-RING MOTOR COOLING INLET	110074	A	Includes all required fasteners and O-ring
KIT- O-RING MOTOR COOLING INLET	110083	B & later	Includes all required fasteners and O-ring

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(2) KIT- MOTOR COOLING VALVE ASSY	110096	All	Includes all required fasteners and O-ring
KIT- O-RING MOTOR COOLING INLET	110083	All	Includes all required fasteners and O-ring



## 2.1.9 Motor Cooling Exit

The Motor Cooling Exit Valve controls refrigerant flow away from the compressor in the motor cooling flow circuit.

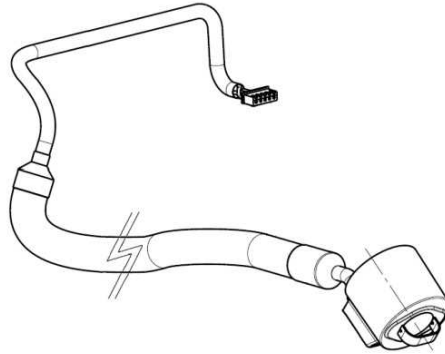


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- FLANGE COOLING EXIT	110097	B & later	Includes all required fasteners and O-ring
KIT- O-RING MOTOR COOLING EXIT	110075	A	Includes all required fasteners and O-ring
KIT- O-RING MOTOR COOLING EXIT	110122	B & later	Includes all required fasteners and O-ring

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- FLANGE COOLING EXIT	110097	All	Includes all required fasteners and O-ring
KIT- O-RING MOTOR COOLING EXIT	110122	All	Includes all required fasteners and O-ring

### 2.1.10 Motor Cooling Valve Cable

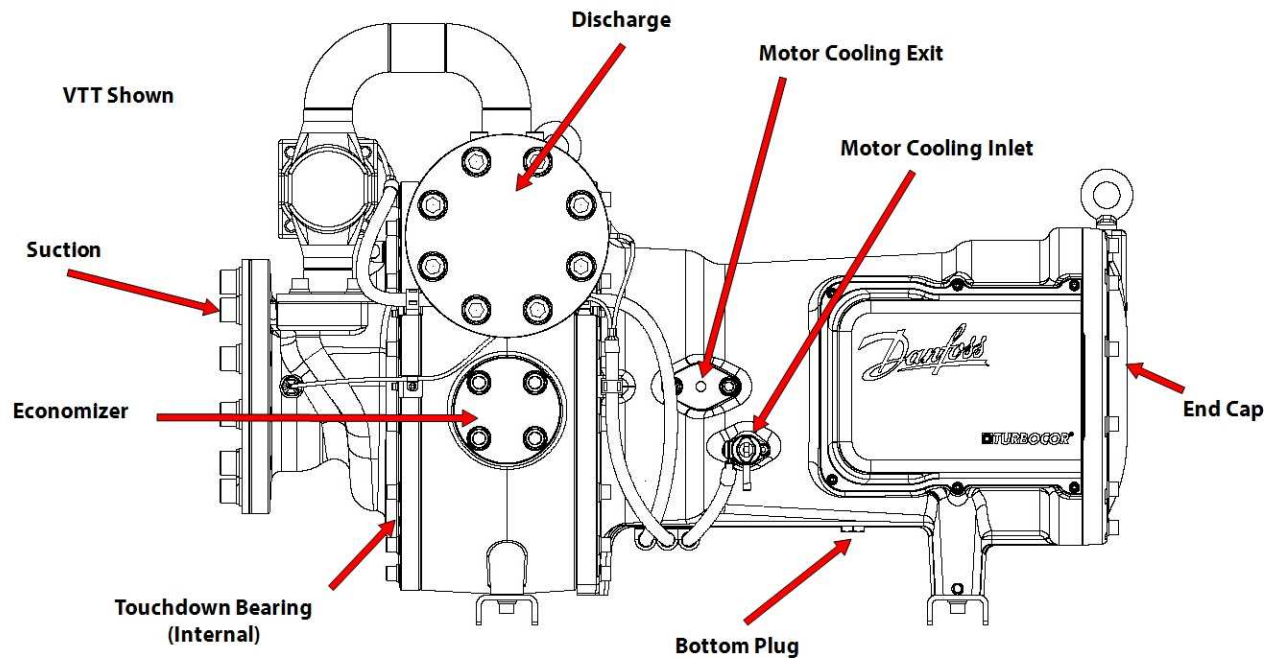
The Motor Cooling Valve Cable connects the CCM to the Motor Cooling Valve.



APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- CABLE MOTOR COOLING VALVE	110060	All	Cable only

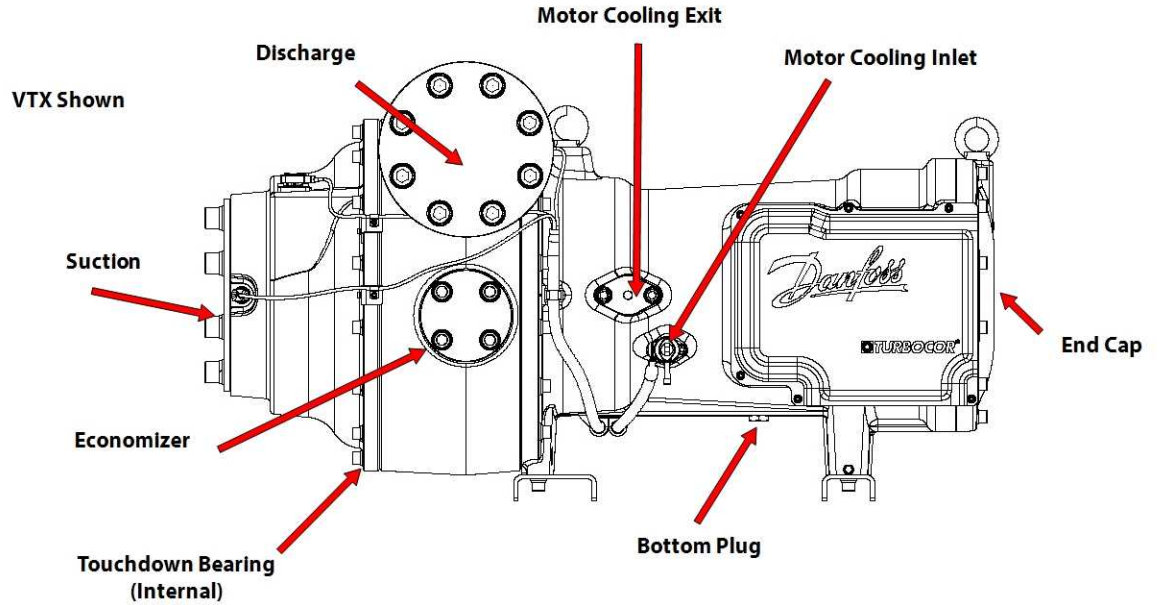
APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- CABLE MOTOR COOLING VALVE	110060	All	Cable only

## 2.1.11 O-Ring Replacement Kits - VTT



APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- O-RING BOTTOM PLUG	110053	All	Cable only
KIT - O-RING END CAP	110071	All	O-ring underneath the end cap.
KIT- O-RING PORTS CONNECTIONS	110120	A	Contains the suction, discharge, inlet cooling flange, exit cooling flange, and economizer O-rings
KIT- O-RING PORTS CONNECTIONS	110076	B & C	Contains the suction, discharge, inlet cooling flange, exit cooling flange, and economizer O-rings
KIT- COMPLETE COMPRESSOR O-RING REPLACEMENT	110094	All	Contains Inlet cooling flange, exit cooling flange, economizer, bottom plug, discharge, suction inlet, volute, feedthrough, IFV pipe, motor tower, suction housing, end cap, touchdown bearing, & power/motor feedthrough O-rings.

### 2.1.12 O-Ring Replacement Kits - VTX



APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- O-RING BOTTOM PLUG	110053	All	O-ring for the plug on the bottom of the compressor.
KIT - O-RING END CAP	110071	All	O-ring underneath the end cap.
KIT- O-RING PORTS KIT- O-RING PORTS CONNECTIONS	112036	All	Contains the suction, discharge, inlet cooling flange, exit cooling flange, and economizer O-rings
KIT- COMPLETE COMPRESSOR O-RING REPLACEMENT	112037	All	Contains Inlet cooling flange, exit cooling flange, economizer, bottom plug, discharge, suction inlet, volute, feedthrough, IGV/Suction Housing, motor tower, suction housing, end cap, touchdown bearing, & power/ motor feedthrough O-rings.

### 2.1.13 Fastener Kits

More kits coming soon!

APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - FASTENERS - END CAP	110112	All	Includes End Cap fasteners

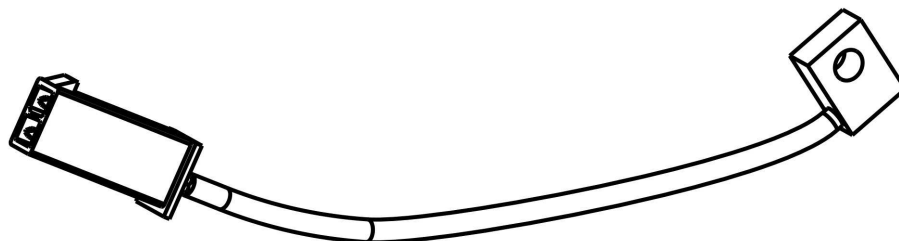
APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - FASTENERS - END CAP	110112	All	Includes End Cap Fasteners

## 2.2 Internal Components

This section focuses on the internal spare part kits available.

## 2.2.1 Stator Cooling Temperature Sensor

The Stator Cooling Temperature sensor is used in the calculation for stator superheat which controls the position of the motor cooling valve. The Stator Cooling Temperature Sensor is located just inside the rear of the Compressor.



### NOTE

Replacement of the End Cap fasteners are strongly recommended.

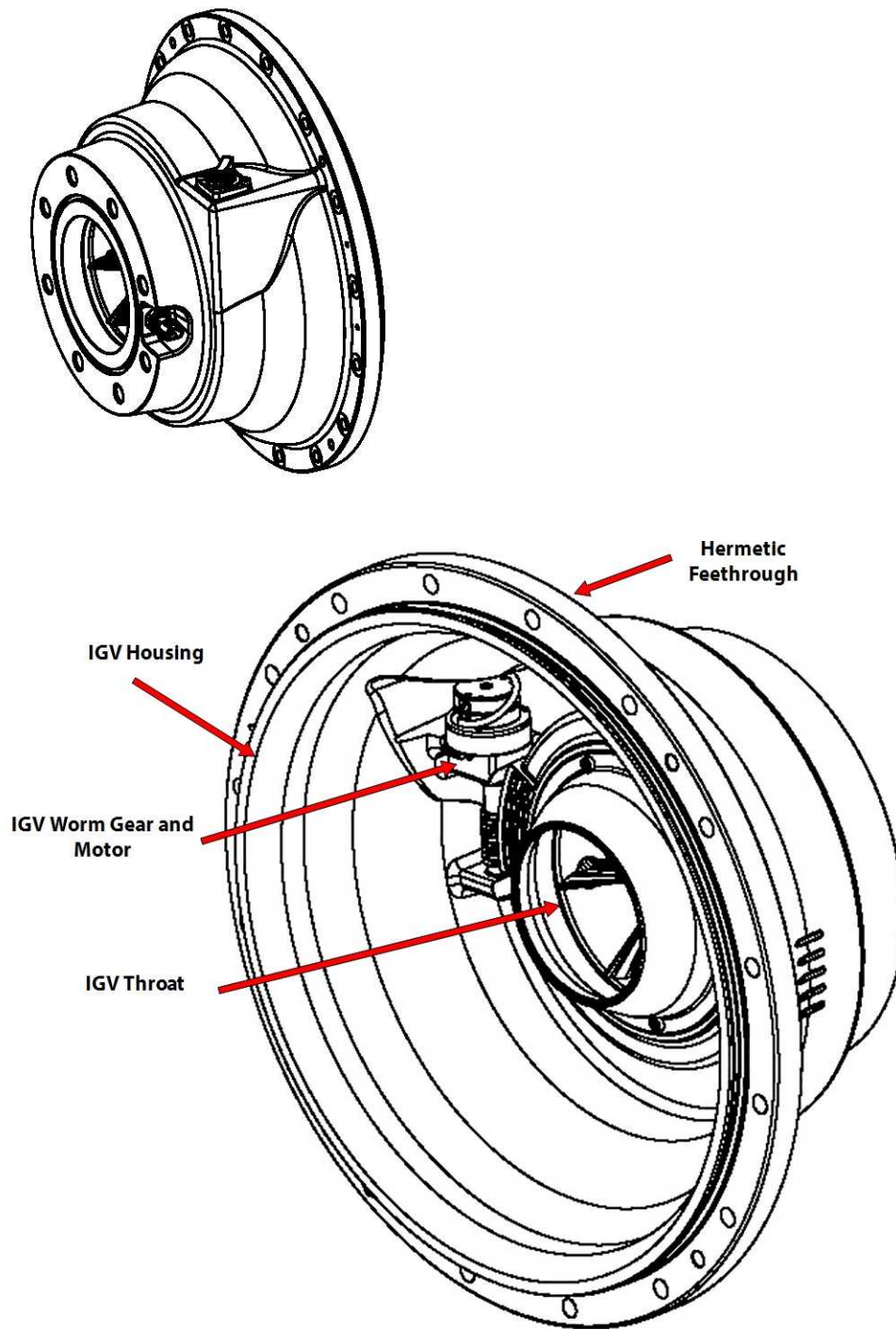
### APPLIES TO: VTT1200

DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - STATOR COOLING TEMPERATURE SENSOR	110111	All	Includes End Cap O-ring and mounting fastener
KIT - FASTENERS - END CAP	110112	All	Includes End Cap fasteners

### APPLIES TO: VTX1600

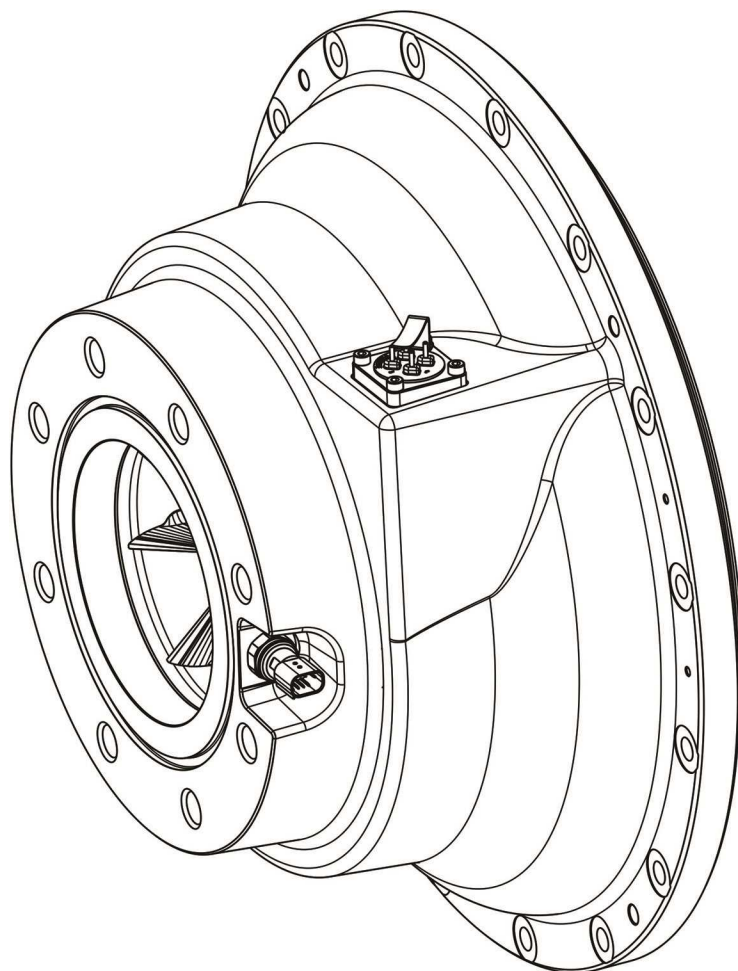
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - STATOR COOLING TEMPERATURE SENSOR	110111	All	Includes End Cap O-ring and mounting fastener
KIT - FASTENERS - END CAP	110112	All	Includes End Cap Fasteners

2.3 IGV End Assembly



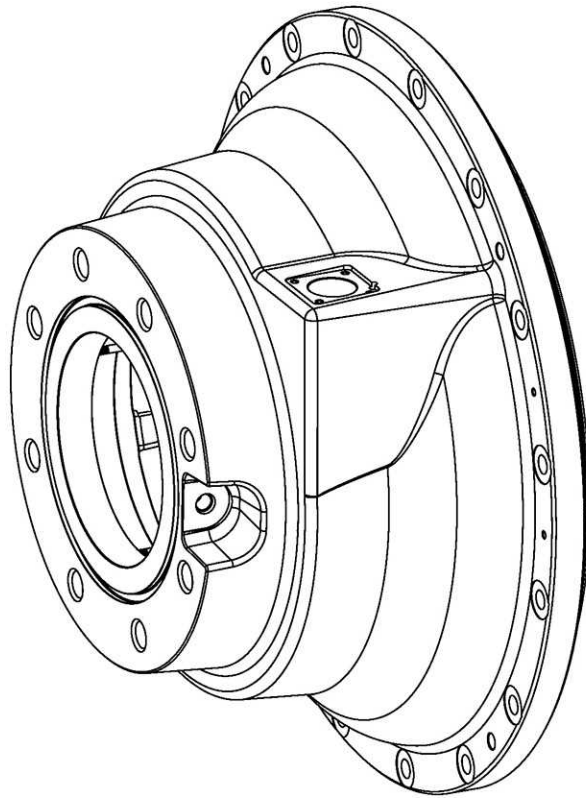


### 2.3.1 IGV Drive Assembly



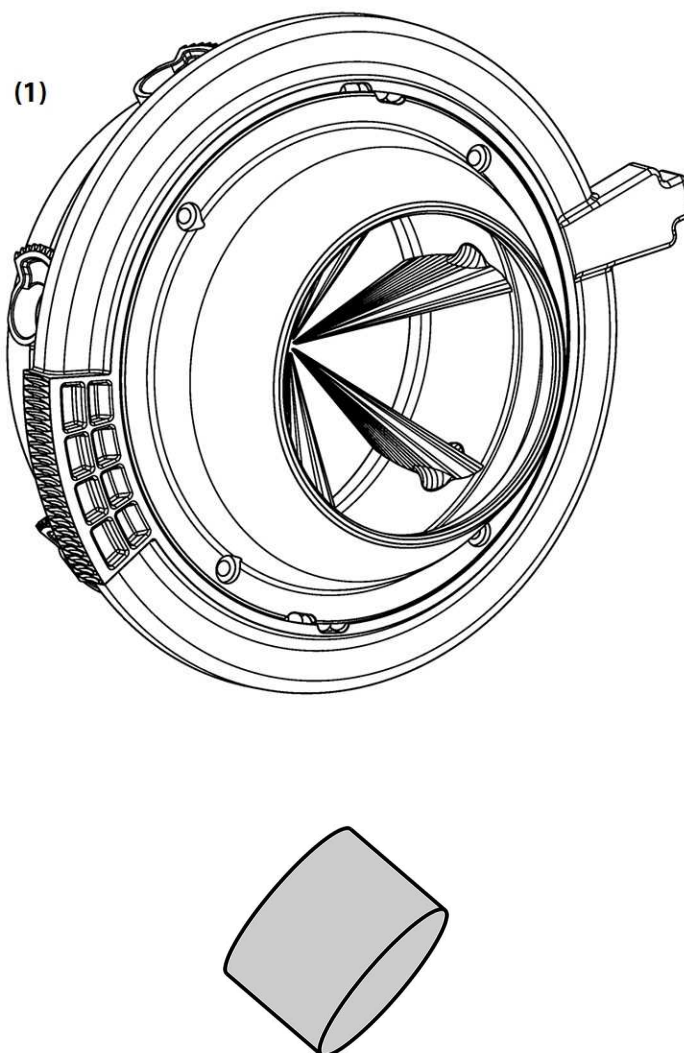
APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - IGV - DRIVE ASSEMBLY AND O-RING - VTX1600	112040	All	Includes O-rings and required fasteners
KIT - O-RING - VTX IGV SUCTION HOUSING	112039	All	Includes O-ring and required fasteners

2.3.2 IGV Housing



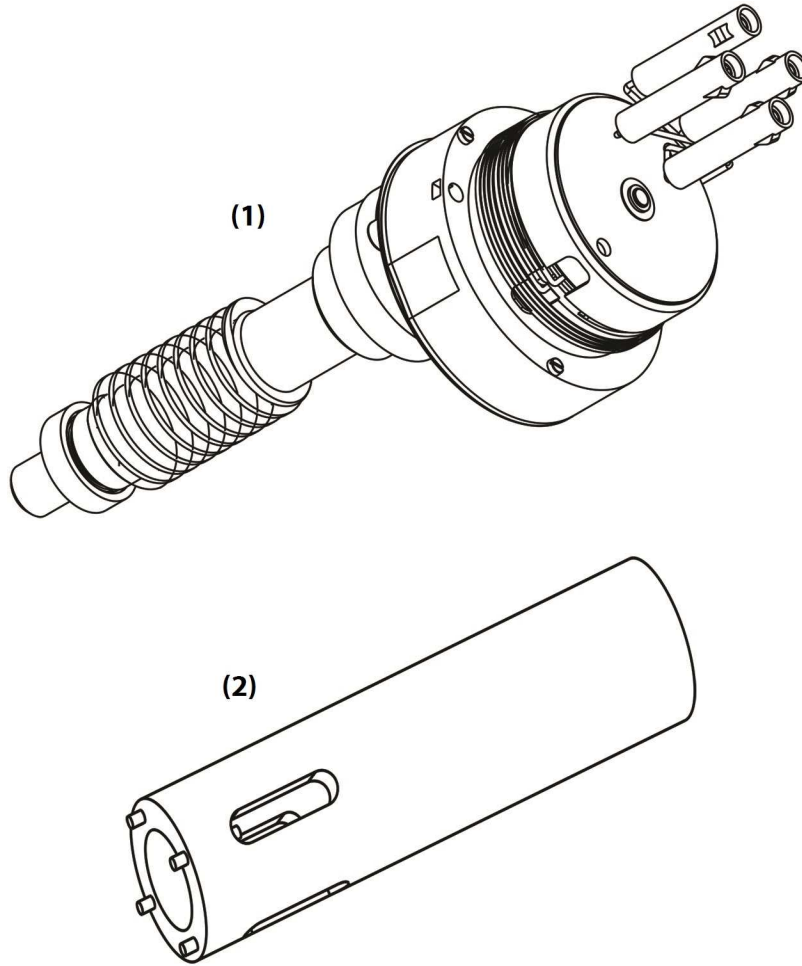
APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - IGV - HOUSING - VTX1600	112041	All	Includes O-rings and required fasteners

2.3.3 IGV Throat



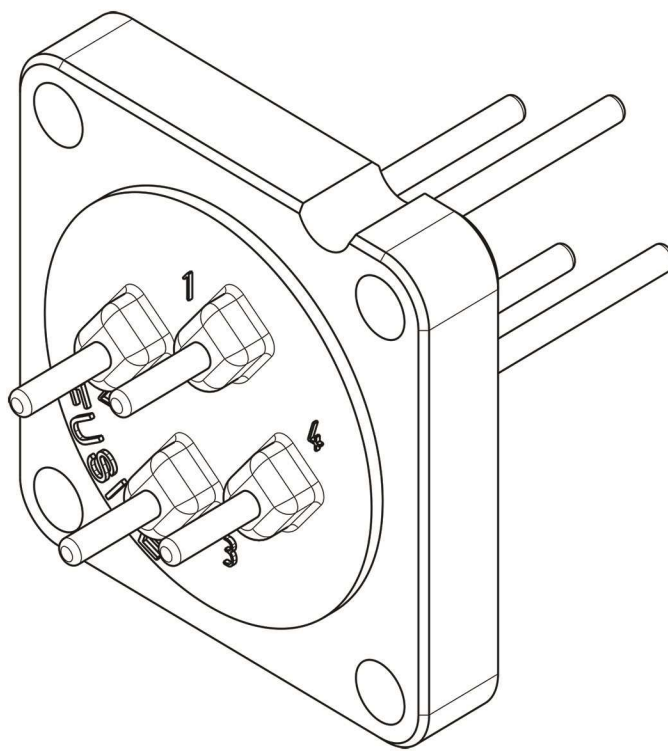
APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - IGV - THROAT - VTX1600	112042	All	Includes O-rings and required fasteners
(2) KIT - MAGNET IGV POSITION	112043	All	Includes three (3) magnets) - Used externally to determine the position of the IGV

### 2.3.4 IGV Worm Gear and Motor



APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - IGV - WORM GEAR SHAFT REPAIR	112044	All	Includes O-rings and required fasteners Contains Worm Gear, Stepper Motor, Bearings, Collars, Clips, O-rings, and fasteners
(1) KIT - IGV - MOTOR SERVICE	112045	All	Includes Motor, O-rings, and fasteners
(2) KIT - EXTRACTOR WORM GEAR	100246	All	Worm Gear Extractor tool only

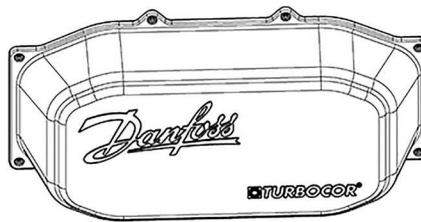
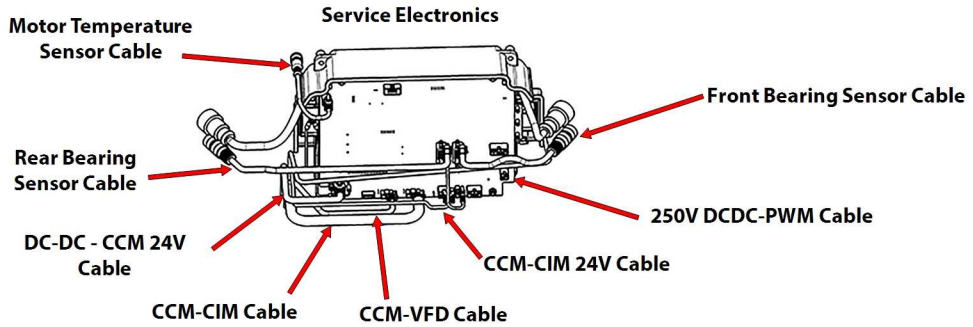
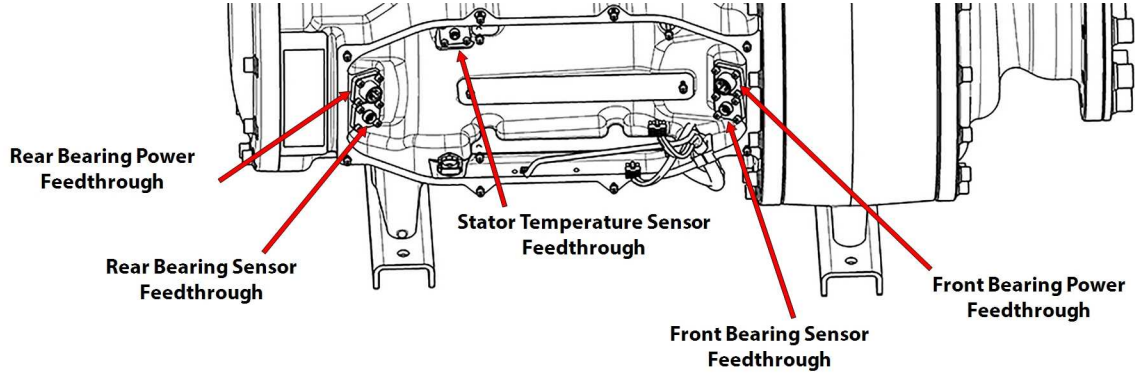
### 2.3.5 Hermetic Feedthrough IGV 4-Pin



APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - IGV - HERMETIC FEEDTHROUGH IGV 4 PIN	110121	All	Includes O-ring, clamp, and required fasteners
KIT - O-RING IGV - HERMETIC FEEDTHROUGH IGV 4 PIN	112046	All	Includes O-ring, and required fasteners

## 2.4 Service Side

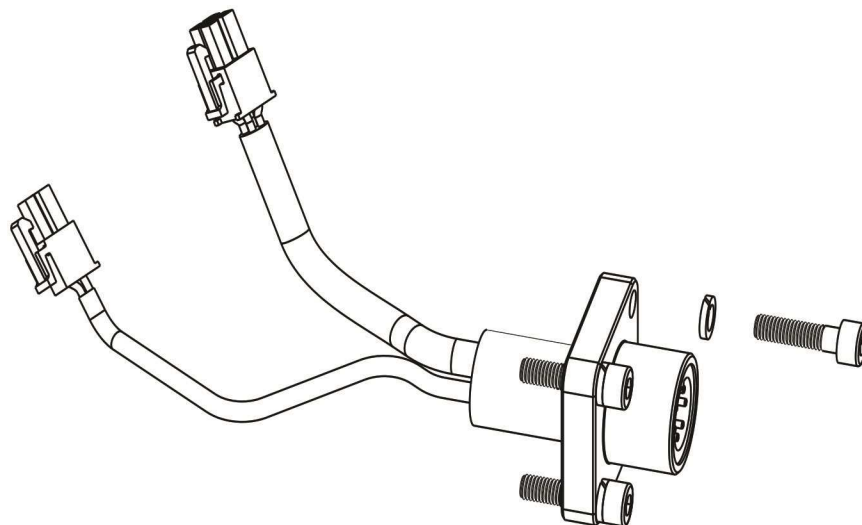
This section focuses on the spare part kits available on the service side of the compressor, underneath and including the Service Side Cover as depicted below.



Service Side Cover

### 2.4.1 Rear Bearing Power Feedthrough

The Rear Bearing Power Feedthrough supplies power from the Pulse Width Modifier (PWM) to the front radial magnetic bearing actuators, while keeping refrigerant pressure from escaping.

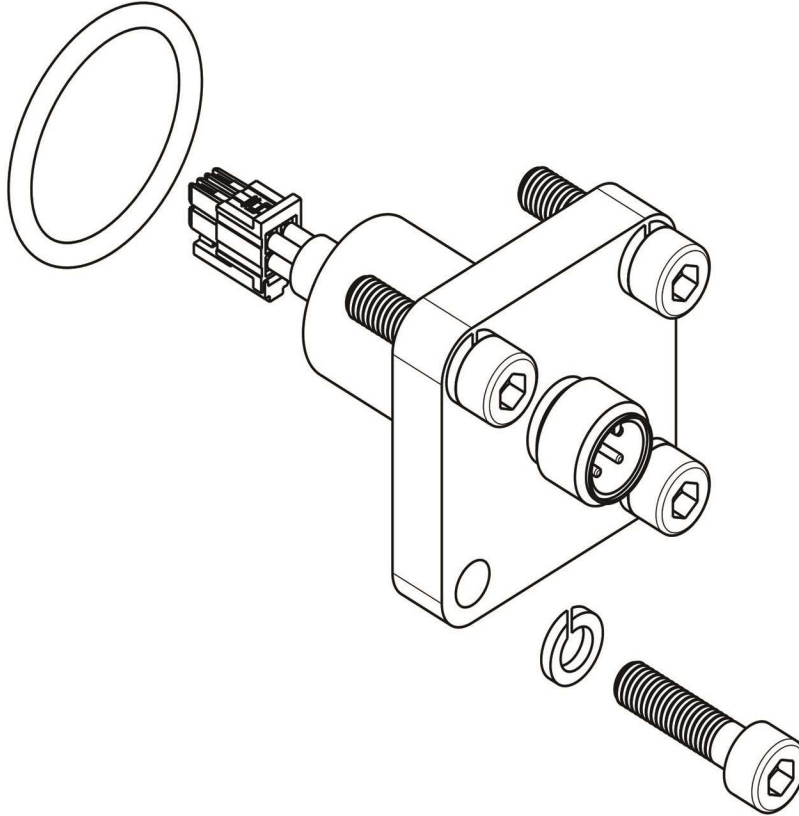


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- FEEDTHROUGH POWER REAR BEARING	110027	All	Includes all required fasteners and O-rings

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- FEEDTHROUGH POWER REAR BEARING	110027	All	Includes all required fasteners and O-rings

### 2.4.2 Stator Sensor Temperature Feedthrough

The Stator Temperature Sensor Feedthrough passes the reading of the stator temperature thermistors to the CCM for conversion to a digital signal used to determine actual motor winding temperature, while keeping refrigerant pressure from escaping.



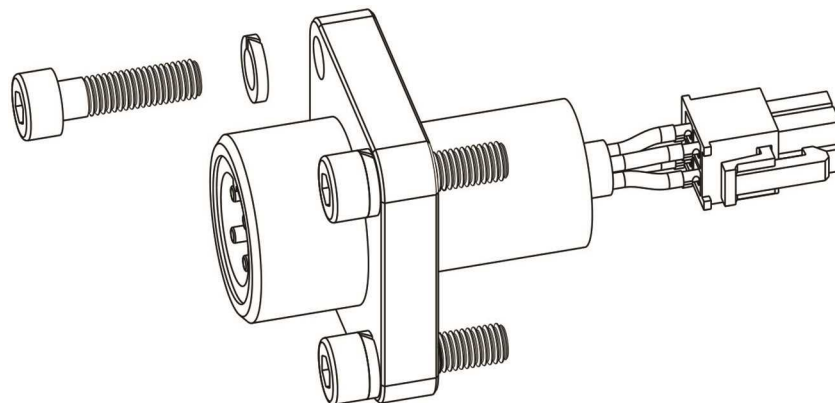
APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- STATOR TEMPERATURE SENSOR FEEDTHROUGH	110070	All	Includes all required fasteners and O-rings

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- STATOR TEMPERATURE SENSOR FEEDTHROUGH	110070	All	Includes all required fasteners and O-rings



### 2.4.3 Front Bearing Power Feedthrough

The Front Bearing Power Feedthrough supplies power from the PWM to the front radial magnetic bearing actuators, while keeping refrigerant pressure from escaping.

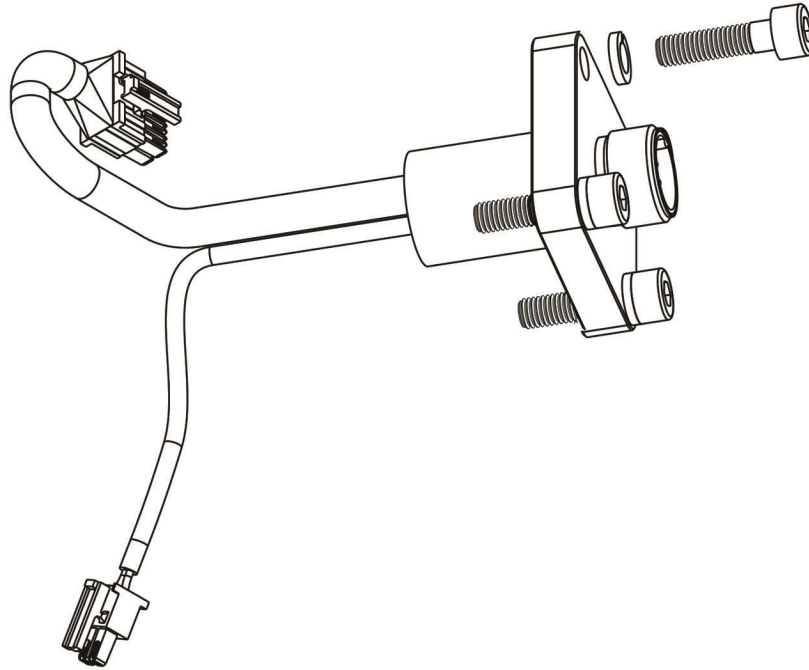


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - FEEDTHROUGH POWER FRONT BEARING	110026	All	Includes all required fasteners and O-rings

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - FEEDTHROUGH POWER FRONT BEARING	110026	All	Includes all required fasteners and O-rings

### 2.4.4 Rear Bearing Sensor Feedthrough

The Bearing Sensor Feedthrough supplies shaft position signals from the bearing sensors to the CCM, while keeping refrigerant pressure from escaping.

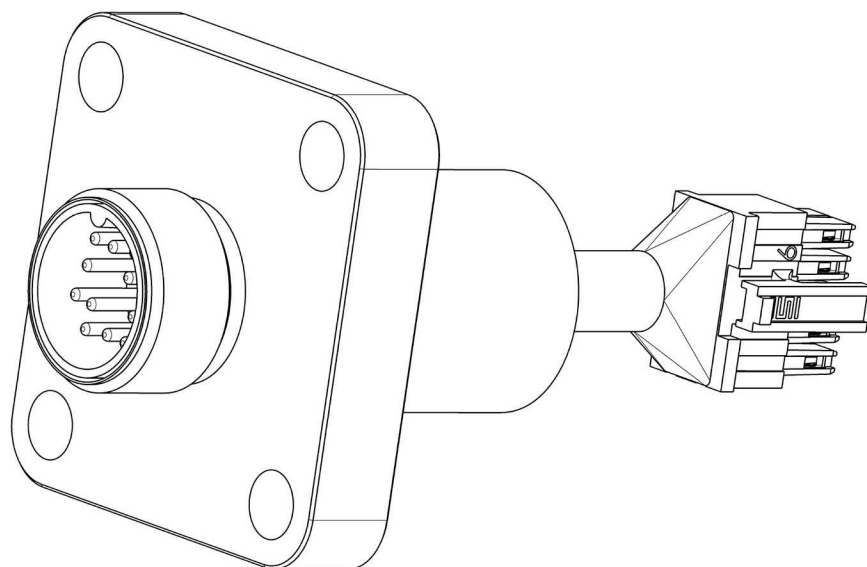


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE REAR BEARING MOTOR SENSOR	110069	All	Includes all required fasteners and O-rings

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE REAR BEARING MOTOR SENSOR	110069	All	Includes all required fasteners and O-rings

## 2.4.5 Front Bearing Sensor Feedthrough

The Bearing Sensor Feedthrough supplies shaft position signals from the bearing sensors to the CCM, while keeping refrigerant pressure from escaping.

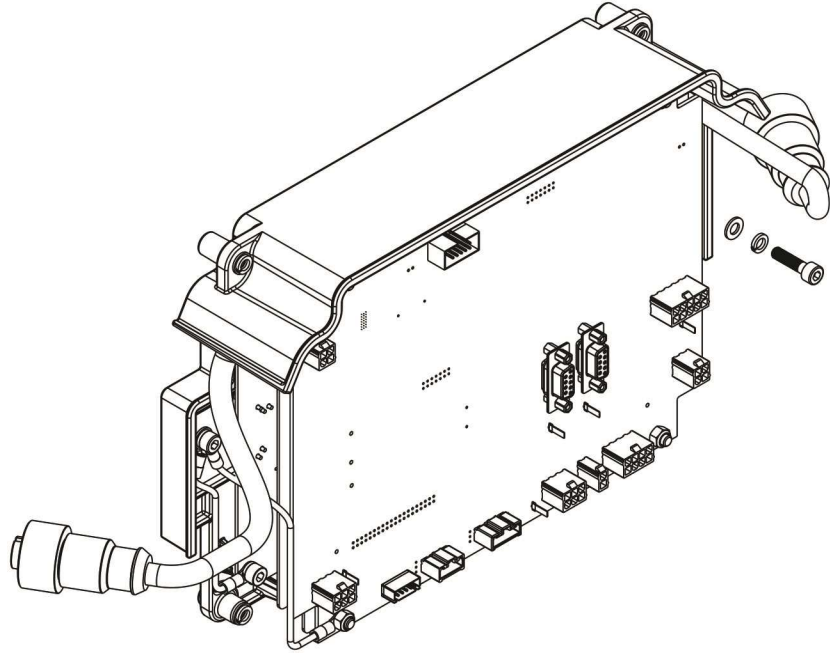


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE BEARING SENSOR FRONT	110068	All	Includes all required fasteners and O-rings

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE BEARING SENSOR FRONT	110068	All	Includes all required fasteners and O-rings

### 2.4.6 Service Electronics

The Service Electronics include the Compressor Control Module (CCM) and Pulse Width Modulation Amplifier (PWM).

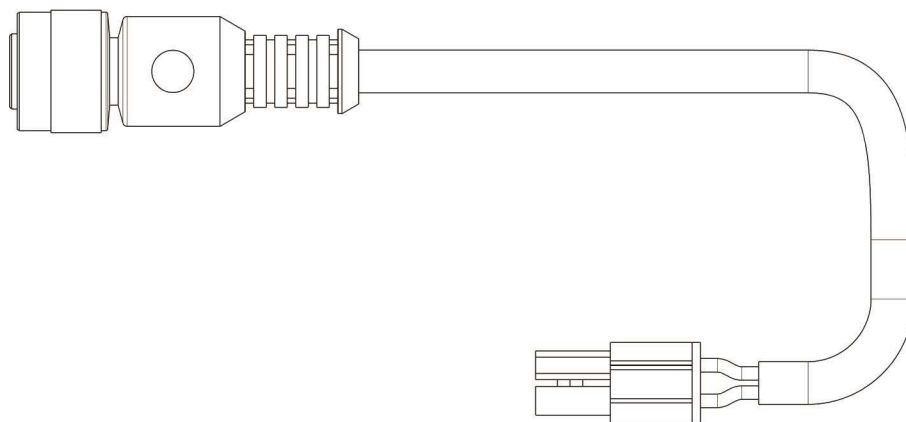


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - SERVICE ELECTRONICS	110109-1	All	Includes all required fasteners

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - SERVICE ELECTRONICS	110109-1	All	Includes all required fasteners

### 2.4.7 Motor Temperature Sensor Cable

The Motor Temp Sensor Cable connects the motor temperature sensor to the CCM .

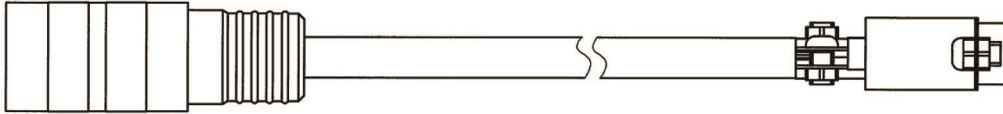


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - THERMAL SIGNAL CABLE	110047	All	Cable only

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - THERMAL SIGNAL CABLE	110047	All	Cable only

### 2.4.8 Front Bearing Sensor Cable

The Front Bearing Sensor Cable provides shaft position information from the Front Bearing Sensor Feedthrough to the CCM.

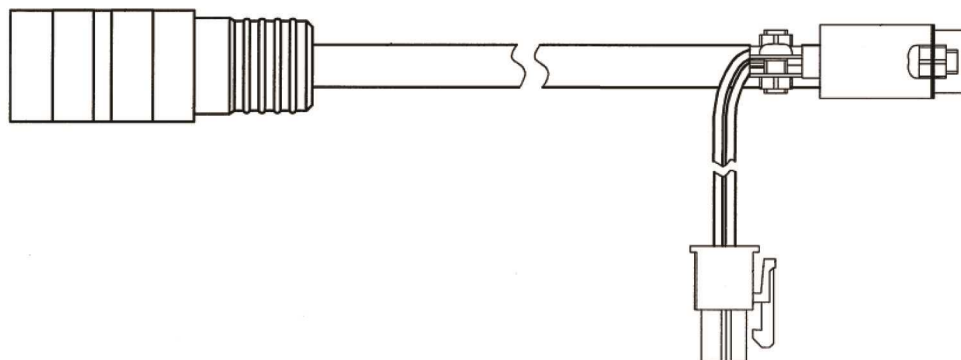


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - TWIN SIGNAL FRONT SENSOR CABLE	110031	All	Cable only

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - TWIN SIGNAL FRONT SENSOR CABLE	110031	All	Cable only

### 2.4.9 Rear Bearing Sensor/ Motor Sensor Cable

The Rear Bearing Sensor/Motor Sensor Cable provides shaft position information from the Rear Bearing Sensor Feedthrough and internal refrigerant temperature to the CCM.

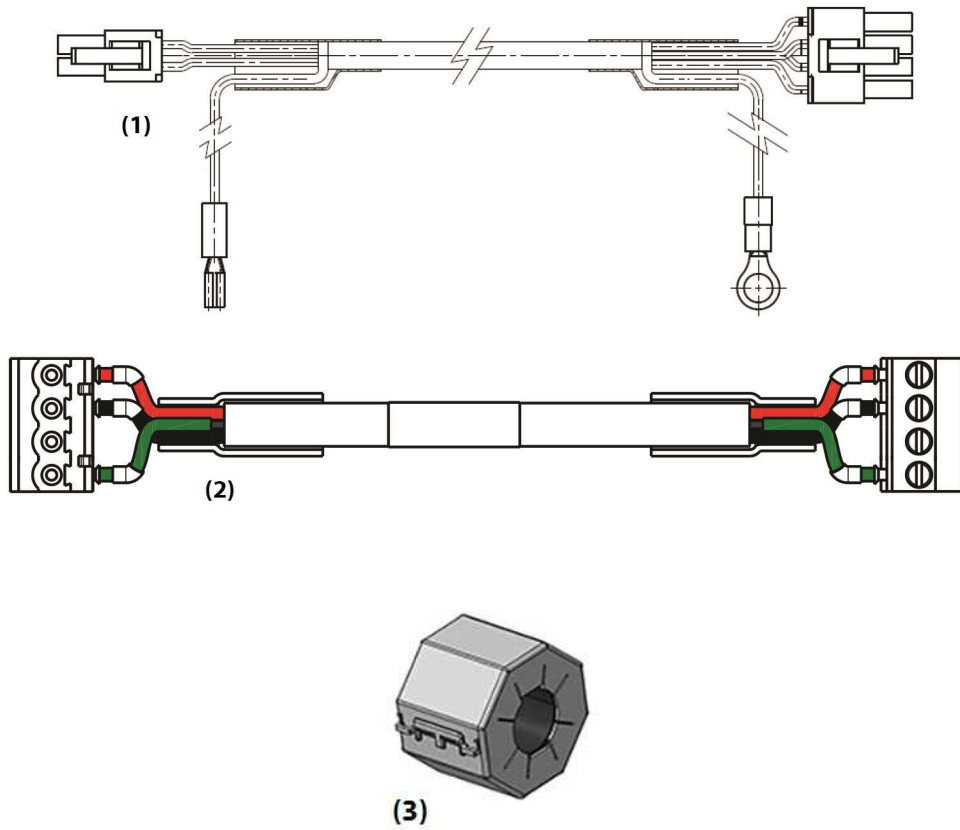


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - COMBO SIGNAL REAR SENSOR CABLE	110039	All	Cable only

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - COMBO SIGNAL REAR SENSOR CABLE	110039	All	Cable only

### 2.4.10 250 V DCDC- PWM Cable

The 250V DCDC-PWM Cable provides a power connection between the DCDC and the PWM.



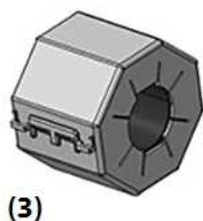
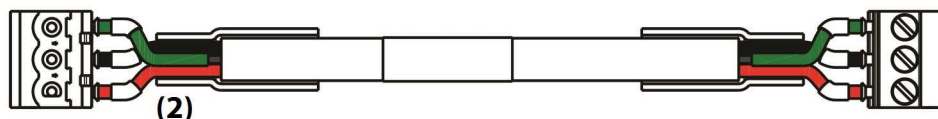
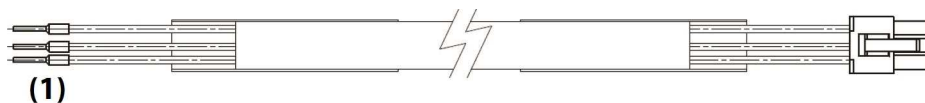
APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - CABLE 250V DCDC - PWM BOARD	110061	A & B	Cable only
(2) KIT - CABLE 250V DCDC - PWM BOARD	110104	C	Includes cable and ferrite choke
(3) KIT - FERRITE CHOKES	112058	C	Includes all chokes

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(2) KIT - CABLE 250V DCDC - PWM BOARD	110104	All	Includes cable and ferrite choke
(3) KIT - FERRITE CHOKES	112058	All	Includes all chokes



### 2.4.11 CCM-CIM 24V Cable

The CCM-CIM 24V Cable passes 24V DC from the CCM to the CIM.

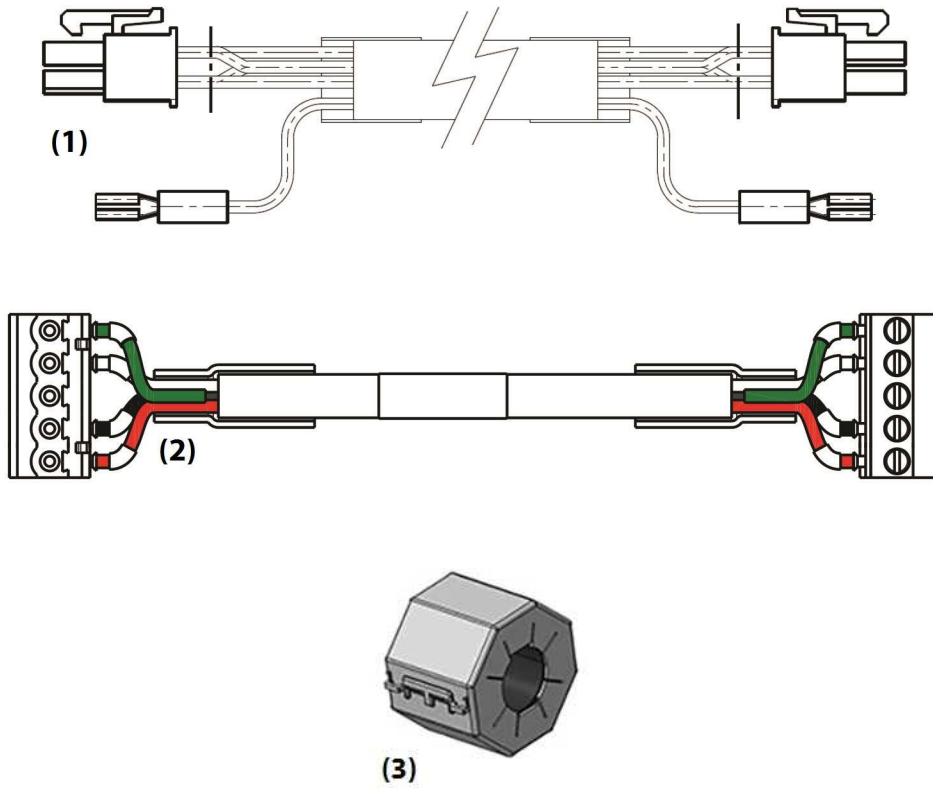


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - CABLE 24V CCM - CIM	110065	A & B	Cable only
(2) KIT - CABLE 24V CCM - CIM	110105	C	Includes cable and ferrite choke
(3) KIT - FERRITE CHOKES	112058	C	Includes all chokes

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(2) KIT - CABLE 24V CCM - CIM	110105	All	Includes cable and ferrite choke
(3) KIT - FERRITE CHOKES	112058	All	Includes all chokes

### 2.4.12 DC-DC-CCM 24 V Cable

The DC-DC-CCM 24V Cable passes 24V DC from the DC-DC to the CCM.



APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - CABLE 24V DCDC - CCM	110058	A & B	Cable only
(2) KIT - CABLE 24V DCDC - CCM	110102	C	Includes cable and ferrite choke
(3) KIT - FERRITE CHOKES	112058	C	Includes all chokes

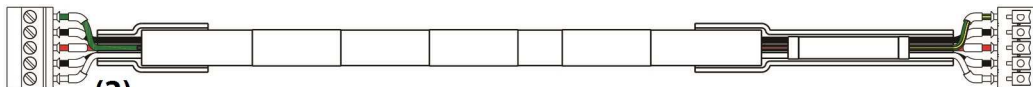
APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(2) KIT - CABLE 24V DCDC - CCM	110102	All	Includes cable and ferrite choke
(3) KIT - FERRITE CHOKES	112058	All	Includes all chokes

### 2.4.13 CCM-CIM Cable

The CCM-CIM Cable provides a connection for communication between the CCM and the CIM.



(1)



(2)



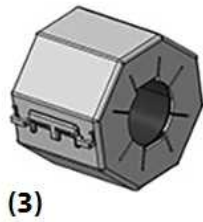
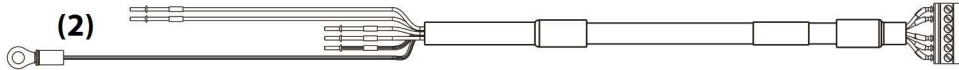
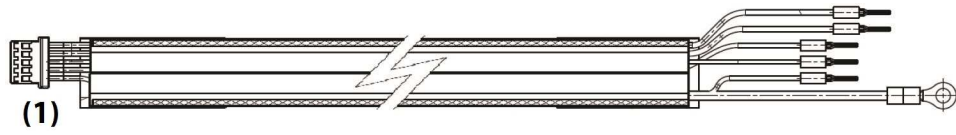
(3)

APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT- CABLE CAN CCM - CIM	110059	A & B	Cable only
(2) KIT- CABLE CAN CCM - CIM	110103	C	Cable only
(3) KIT - FERRITE CHOKES	112058	C	Includes all chokes

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(2) KIT- CABLE CAN CCM - CIM	110103	All	Cable only
(3) KIT - FERRITE CHOKES	112058	All	Includes all chokes

### 2.4.14 CCM-VFD Cable

The VFD Cable provides a connection for communication between the CCM and the VFD.



APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - CABLE VFD - CCM	110057	A & B	Cable only
(2) KIT - CABLE VFD - CCM	110101	C	Includes cable and ferrite choke
(3) KIT - FERRITE CHOKES	112058	C	Includes all chokes

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(2) KIT - CABLE VFD - CCM	110101	All	Includes cable and ferrite choke
(3) KIT - FERRITE CHOKES	112058	All	Includes all chokes

### 2.4.15 Service Side Cover

The Service Side Cover provides protection for the PWM, CCM and feedthroughs.

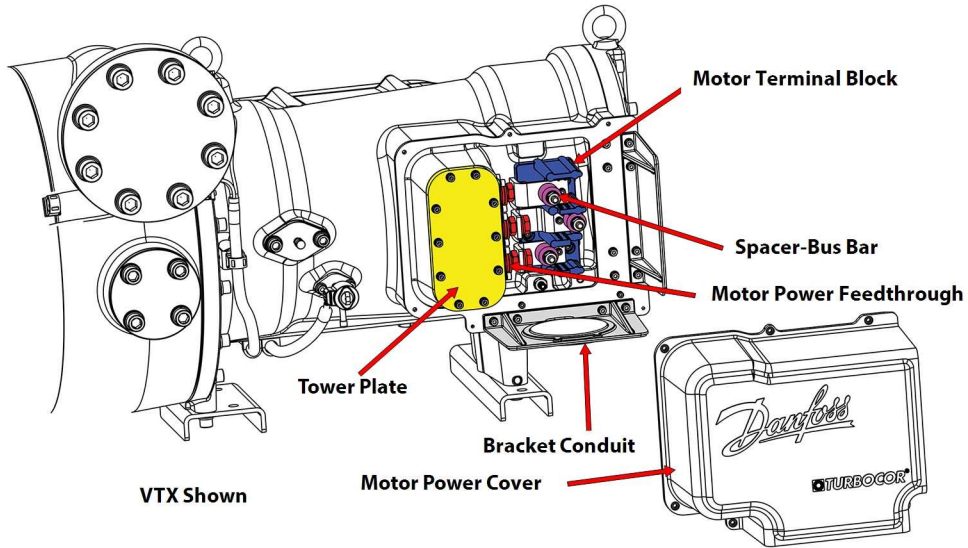
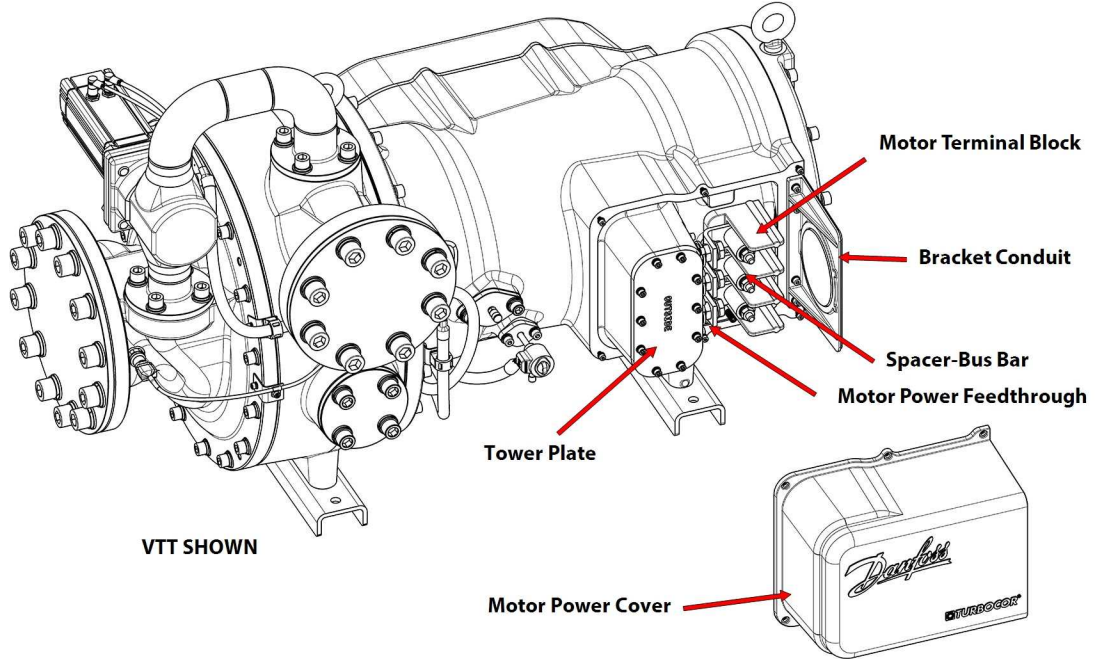


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - SERVICE SIDE COVER	110099	B & C	Includes all fasteners and washers required

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - SERVICE SIDE COVER	110099	All	Includes all fasteners and washers required

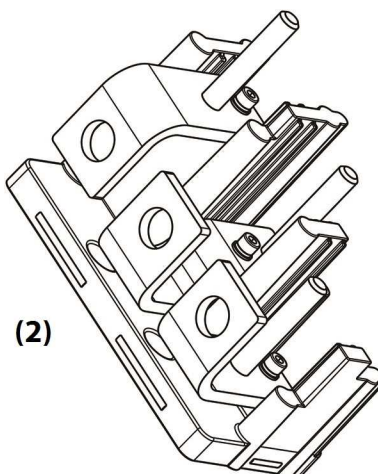
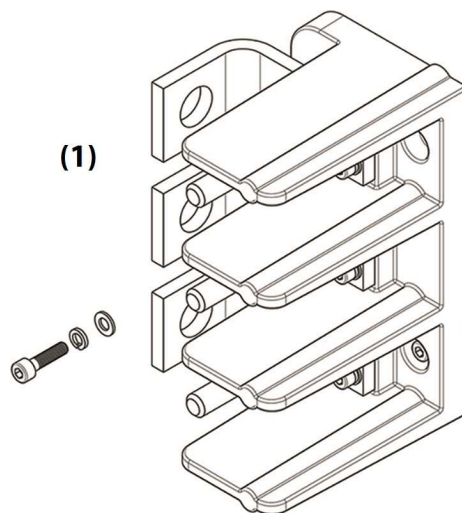
## 2.5 Power Side

This section includes the spare part kits available for parts underneath the Motor Power Cover, and the Motor Power Cover itself located on the power side of the compressor.



## 2.5.1 Motor Terminal Block

The Motor Terminal Block supports and separates the motor bus bars and connects the drive cables to the compressor motor.

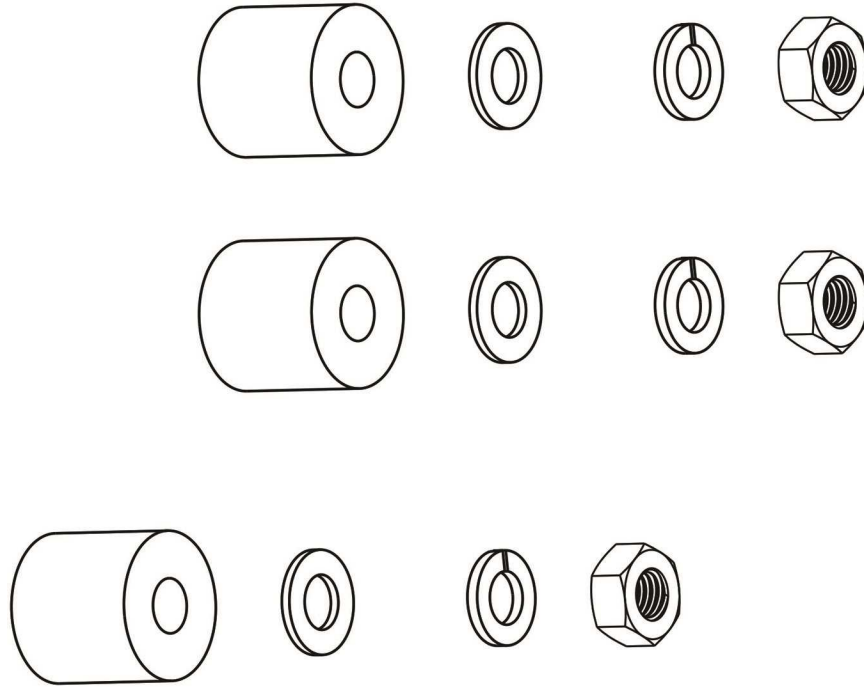


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - TERMINAL BLOCK	110048	All	Includes Terminal Block, bus bars, and required fasteners

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(2) KIT - TERMINAL BLOCK	112047	All	Includes Terminal Block, bus bars, and required fasteners

### 2.5.2 Spacer - Bus Bar

The bus bar spacers connect the motor bus bars to the cables from the drive.



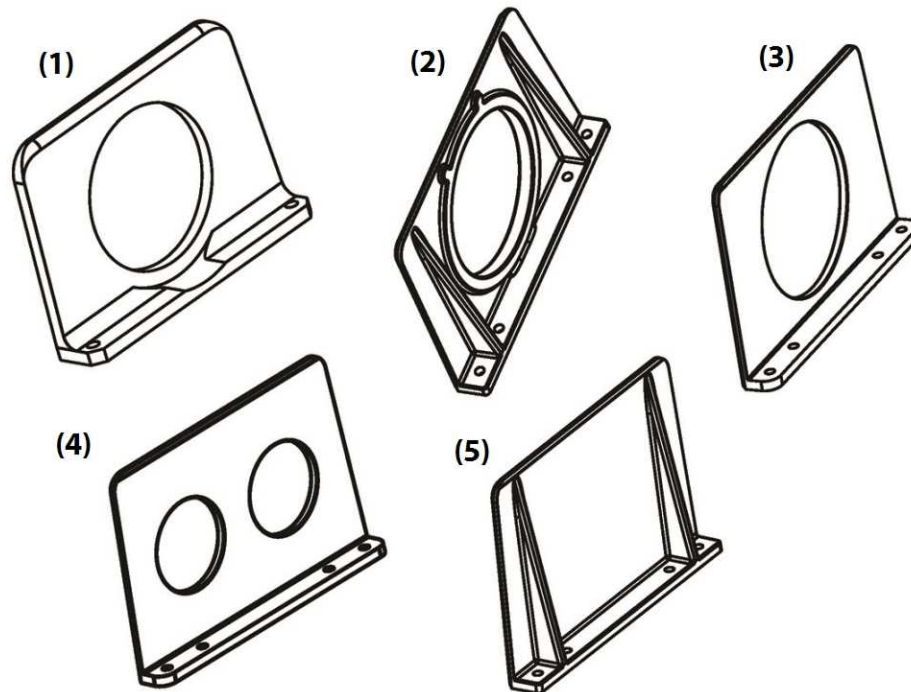
APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - VTT BUS BAR SPACERS	110089	All	Includes all required fasteners

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - VTX BUS BAR SPACERS	112048	All	Includes all required fasteners



### 2.5.3 Bracket Conduit

The Mains Input Bracket provides support for the conduit of the cables from the drive to the compressor motor.

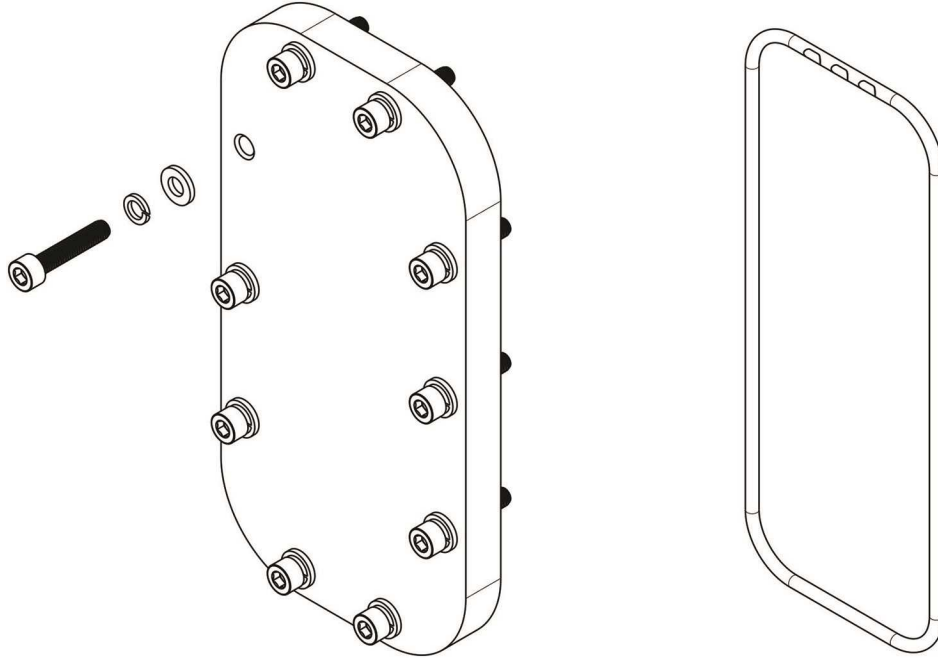


APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - MAINS INPUT BRACKET ONE HOLE	110090	A	Includes all required fasteners
(2) KIT - MAINS INPUT BRACKET ONE HOLE (Plastic)	110100	B & C	Includes all required fasteners
(3) KIT - MAINS INPUT BRACKET ONE HOLE (Metal)	112050	B & C	Includes all required fasteners

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(5) KIT - MAINS INPUT BRACKET NO HOLE	112051	All	Includes all required fasteners
(2) KIT - MAINS INPUT BRACKET ONE HOLE (Plastic)	110100	All	Includes all required fasteners
(3) KIT - MAINS INPUT BRACKET ONE HOLE (Metal)	112050	All	Includes all required fasteners
(4) KIT - MAINS INPUT BRACKET TWO HOLE (Metal)	112059	All	Includes all required fasteners

### 2.5.4 Tower Plate

The Tower Plate covers access to the motor power connection of the internal motor cables while preventing refrigerant pressure from escaping.



#### NOTE

The word "OUTSIDE" is no longer placed on the Tower Plate.

#### APPLIES TO: VTT1200

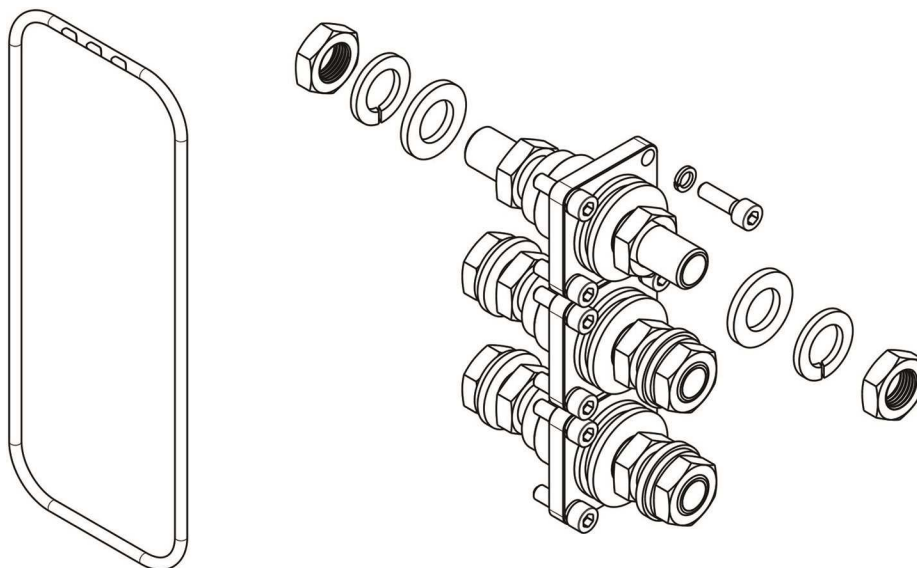
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - TOWER PLATE	110049	All	Includes all required fasteners and O-ring
KIT - O-RING TOWER PLATE	110051	All	Includes all required fasteners and O-ring

#### APPLIES TO: VTX1600

DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - TOWER PLATE	110049	All	Includes all required fasteners and O-ring
KIT - O-RING TOWER PLATE	110051	All	Includes all required fasteners and O-ring

## 2.5.5 Motor Power Feedthrough

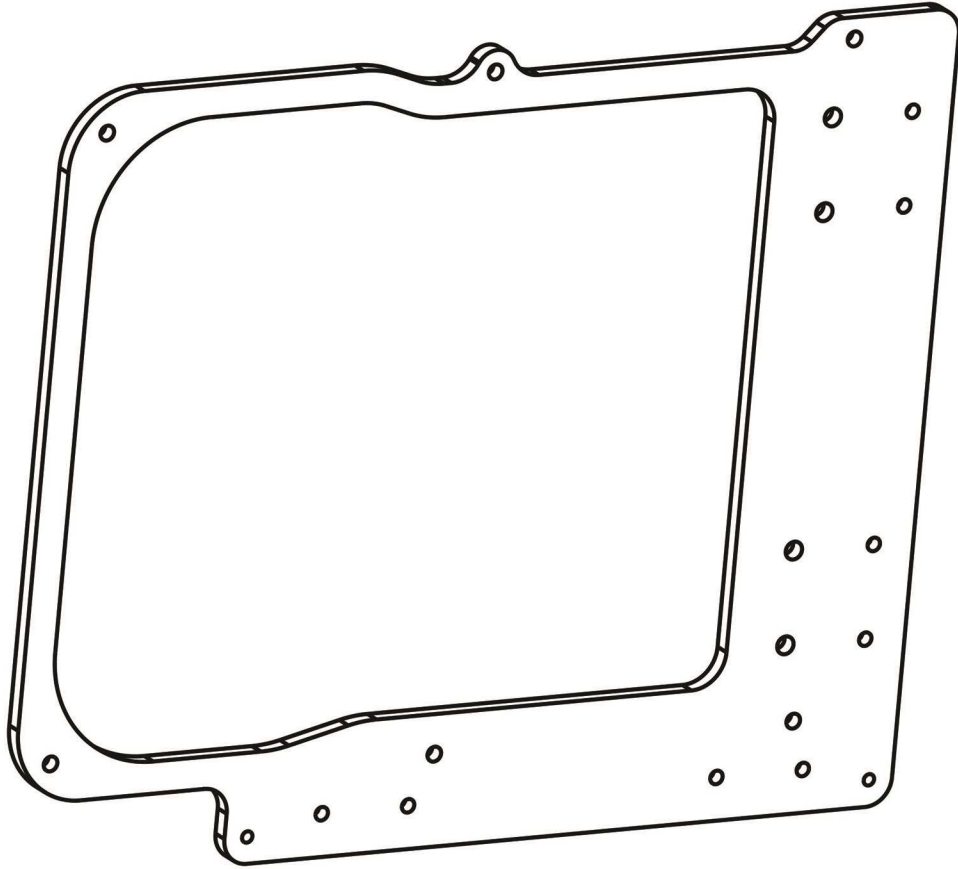
The Motor Power Feedthrough connects the motor bus bars to the internal motor leads while preventing refrigerant pressure from escaping.



APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - FEEDTHROUGH MOTOR POWER	110054	All	Includes all fasteners required to re- place all three, along with pictured O-ring
KIT - FEEDTHROUGH MOTOR POWER (SINGLE)	110093	All	Includes all fasteners required to re- place just one, along with pictured O-ring
KIT - O-RING TOWER PLATE	110051	All	Includes all required fasteners and O-ring

APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - FEEDTHROUGH MOTOR POWER	110054	All	Includes all fasteners required to re- place all three, along with pictured O-ring
KIT - FEEDTHROUGH MOTOR POWER (SINGLE)	110093	All	Includes all fasteners required to re- place all three, along with pictured O-ring
KIT - O-RING TOWER PLATE	110051	All	Includes all required fasteners and O-ring

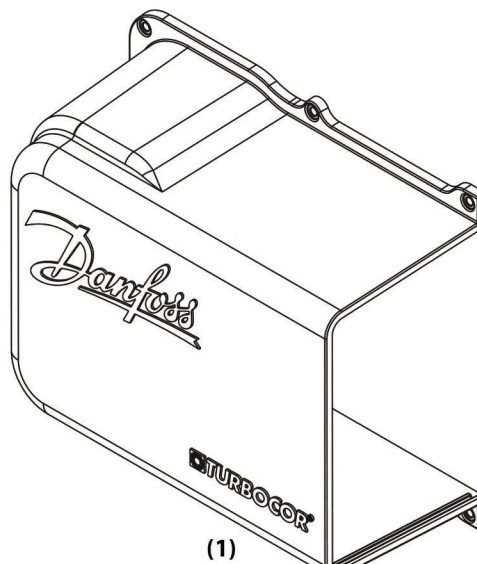
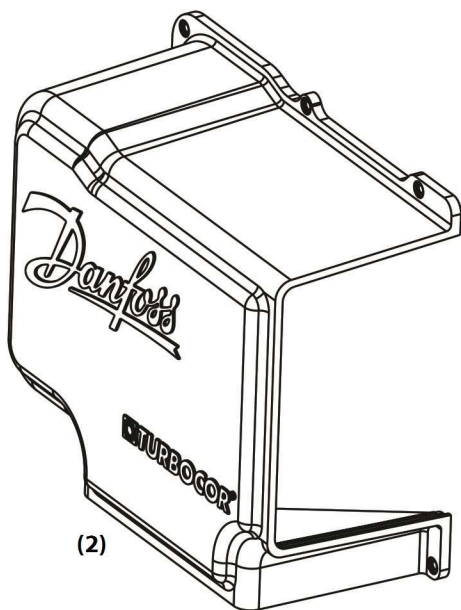
2.5.6 Power Cover Plate



APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - PLATE - POWER COVER	112052	All	Includes Plate and fasteners

### 2.5.7 Motor Power Cover

The Motor Power Cover provides protection for the connection of the cables from the drive to the compressor motor.



APPLIES TO: VTT1200			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - POWER COVER	110098	B & C	Includes all required fasteners

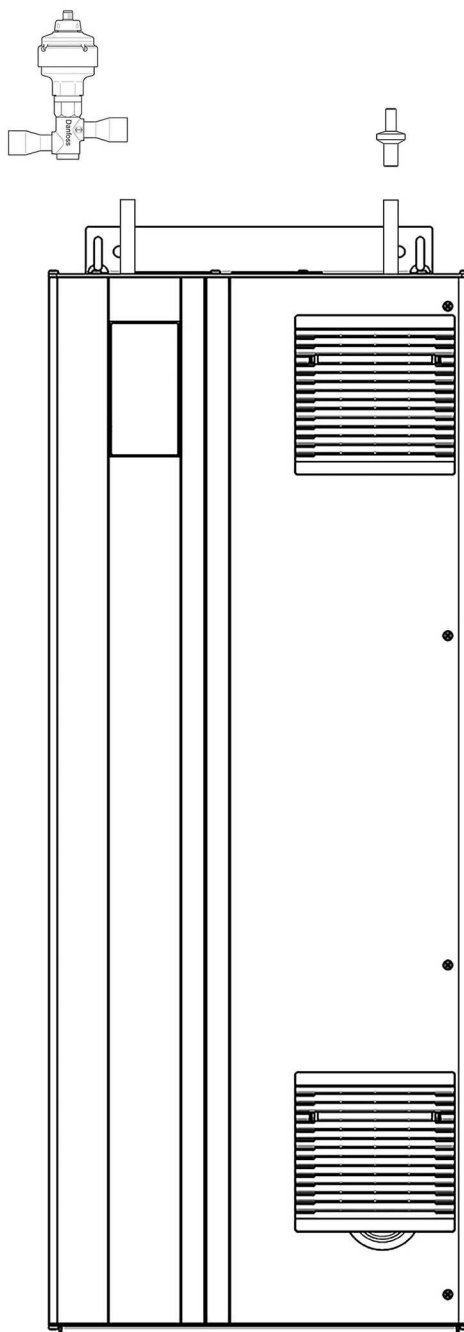
APPLIES TO: VTX1600			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(2) KIT - POWER COVER	112053	All	Includes all required fasteners

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## Chapter 3.0 VFD Components

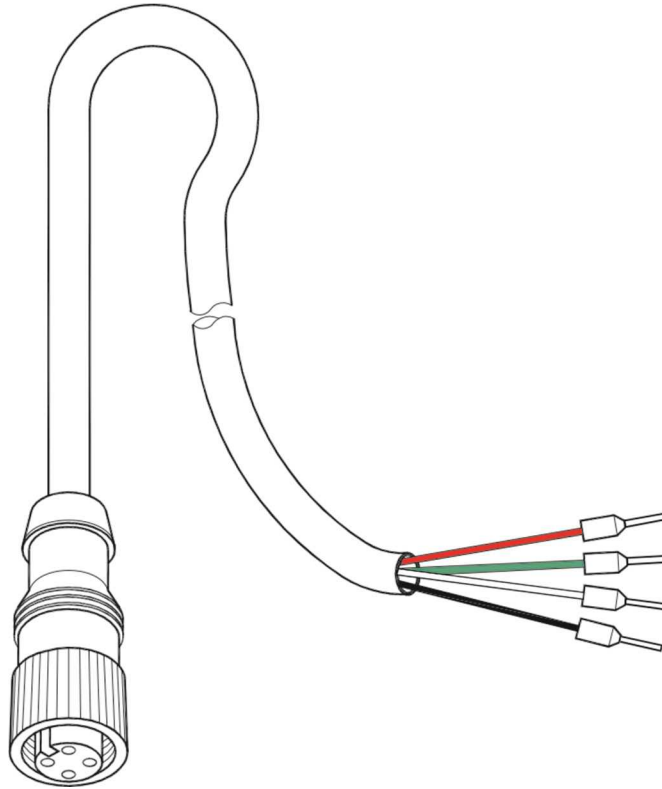
### 3.1 VFD External Components

The following section details the spare parts available for the Variable Frequency Drive Module (VFD). Where applicable the Danfoss Drives part number is displayed (DRIVES PN). When ordering use the Turbocor® part number (PART NO.)



### 3.1.1 VFD Pressure Control Valve Cable

The VFD Pressure Control Valve Cable connects the CIM to the VFD Pressure Control Valve Motor.

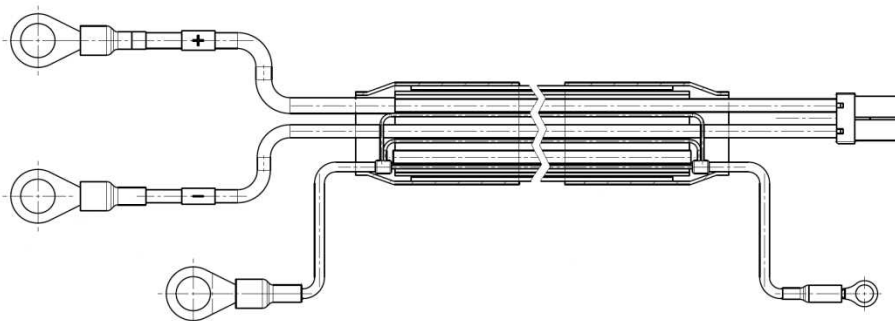


APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE VFD VALVE	110001	N/A	Cable only



### 3.1.2 VFD DC-DC Cable

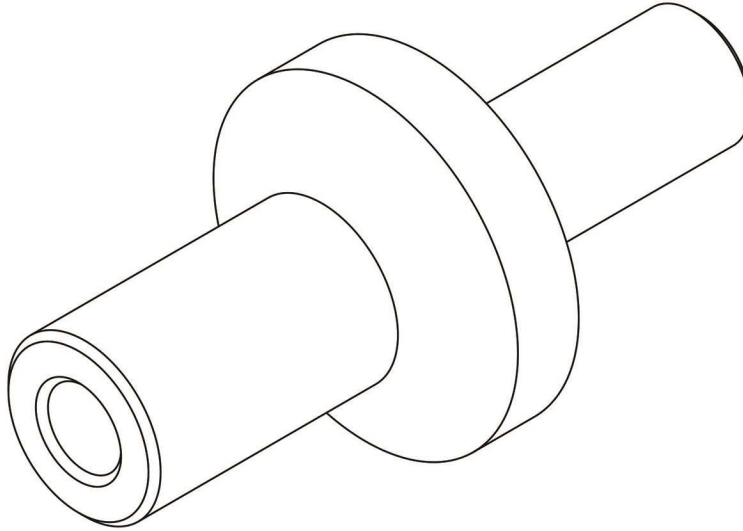
The VFD – DC-DC Cable passes High Voltage DC from the VFD to the DC-DC.



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE VFD VALVE KIT - CABLE VFD - DCDC	110106	N/A	Cable only (15 meters)

**3.1.3 VFD Orifice**

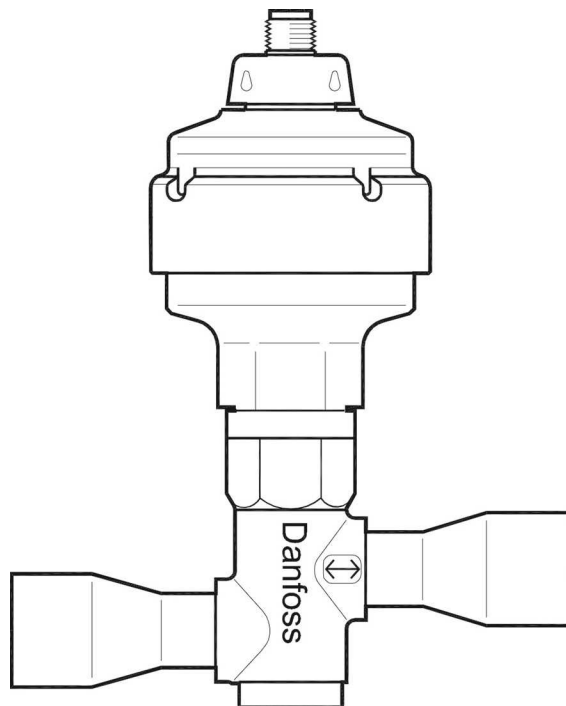
The VFD orifice must be fitted to the VFD drive module at the cold plate tube refrigerant inlet. This orifice controls flow of refrigerant to the VFD module.



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - ORIFICE VFD	110006	N/A	Orifice only

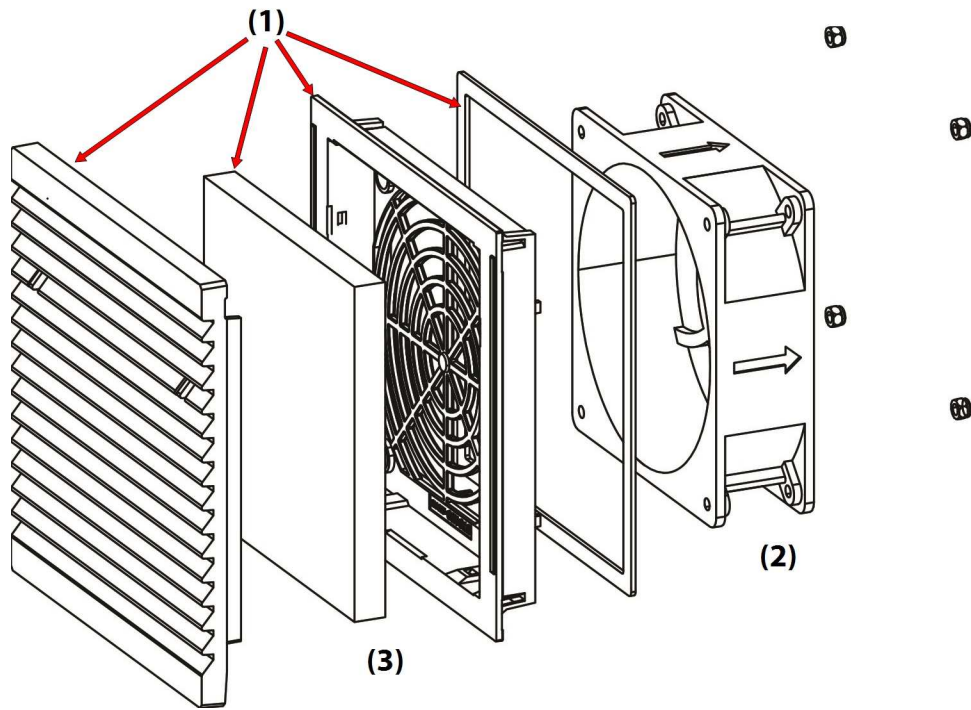
### 3.1.4 VFD Valve

The VFD Valve must be fitted to the VFD at the cold plate tube refrigerant outlet. This valve regulates refrigerant pressure and temperature.



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - VFD VALVE DANFOSS	110085	N/A	Valve only

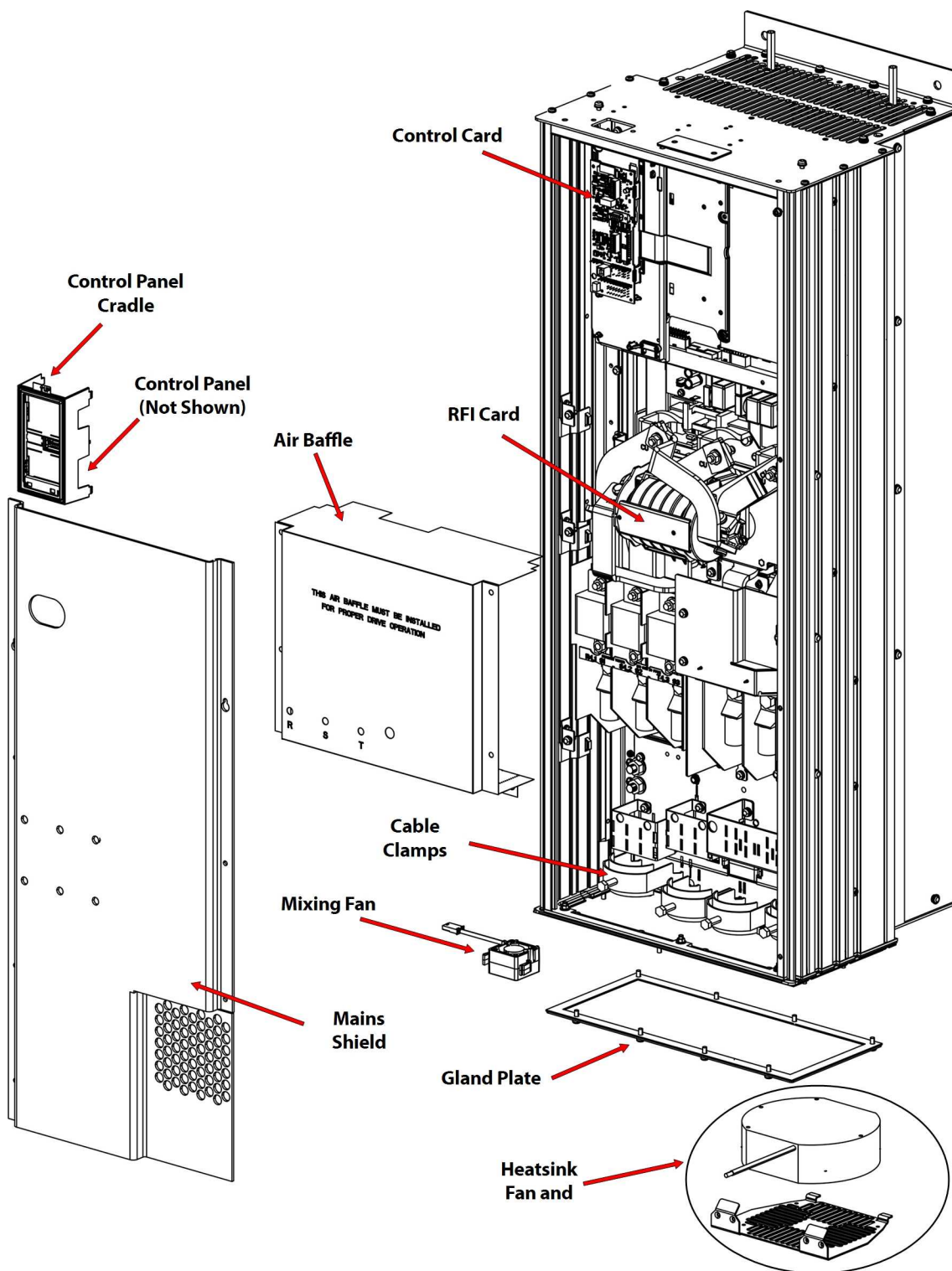
### 3.1.5 VFD Door Vent and Fan



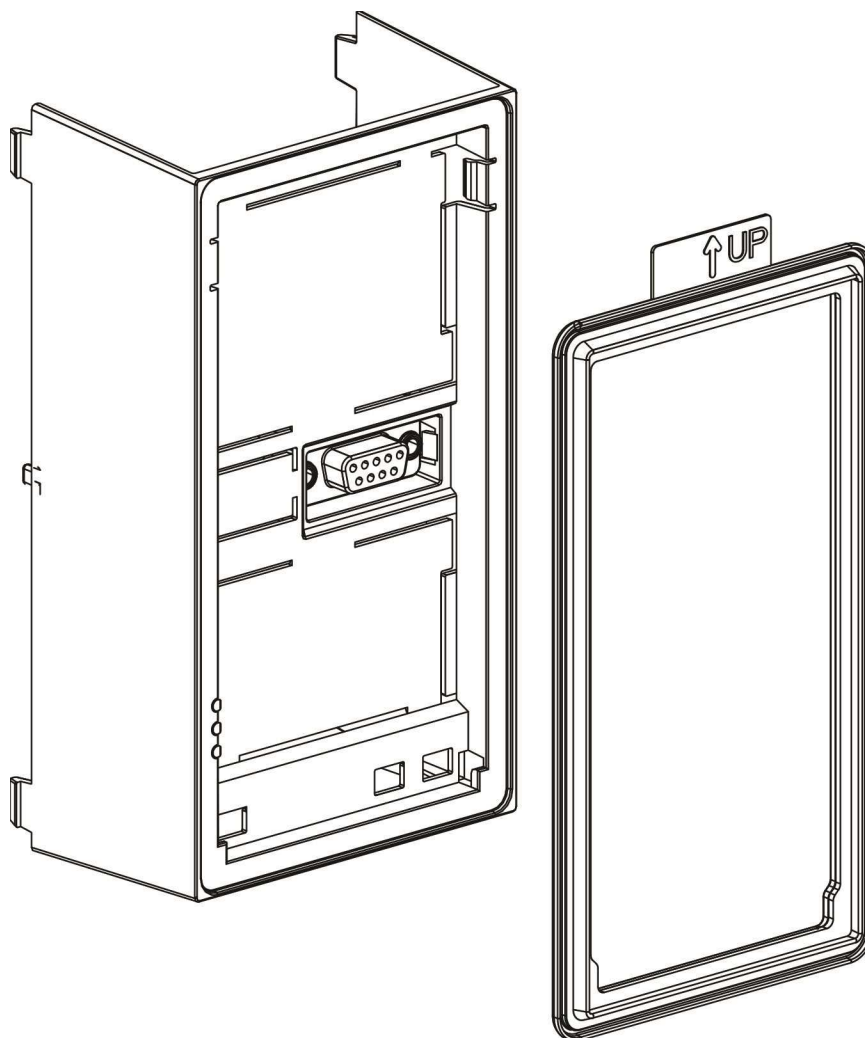
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - DOOR VENT KIT IP21/IP54 DH FRAME	176F3375	N/A	Includes vent, filter, gasket, support, grill, and fasteners Does not include fan
(2) KIT - DOOR FAN IP21/54 DC 120X38	176F3169	N/A	Fan only
(3) KIT - DOOR FAN FILTER DH FRAME PACKAGE OF 10	176F3353	N/A	Package of 10 filters

### 3.2 VFD Internal Components Level 1

The following section details the spare parts available for the Variable Frequency Drive Module (VFD) that are located directly under the outside cover of the drive. This includes covers and fans.

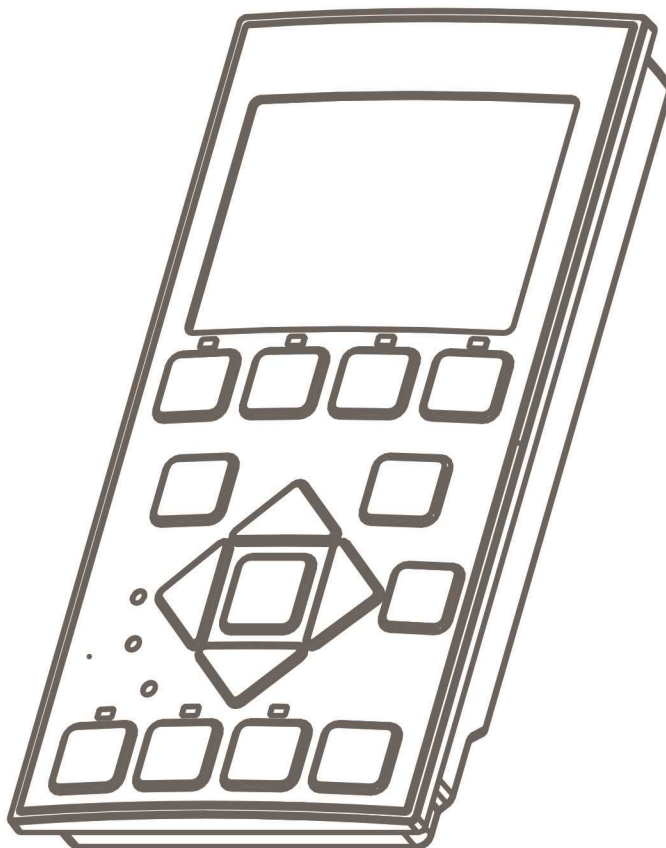


3.2.1 Control Panel Cradle



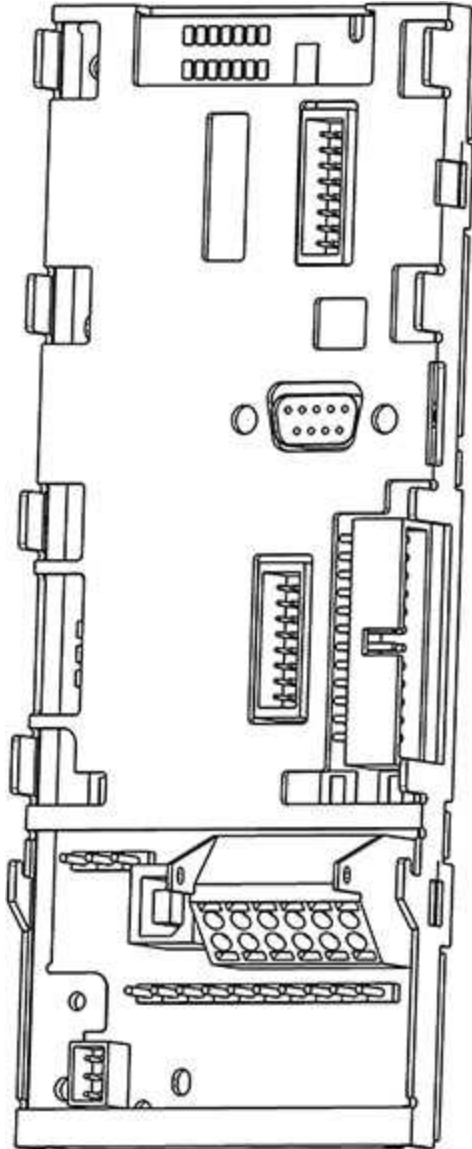
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CRADLE FOR A5,B1,B2,C1,C2,D2H ENCLOSURE	130B0264	N/A	Includes cradle and gasket

3.2.2 Control Panel



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CONTROL PANEL, LCP 102 A5,B1,B2,C1,C2,D2H ENCLOSURE	130B1107	N/A	Includes control panel only

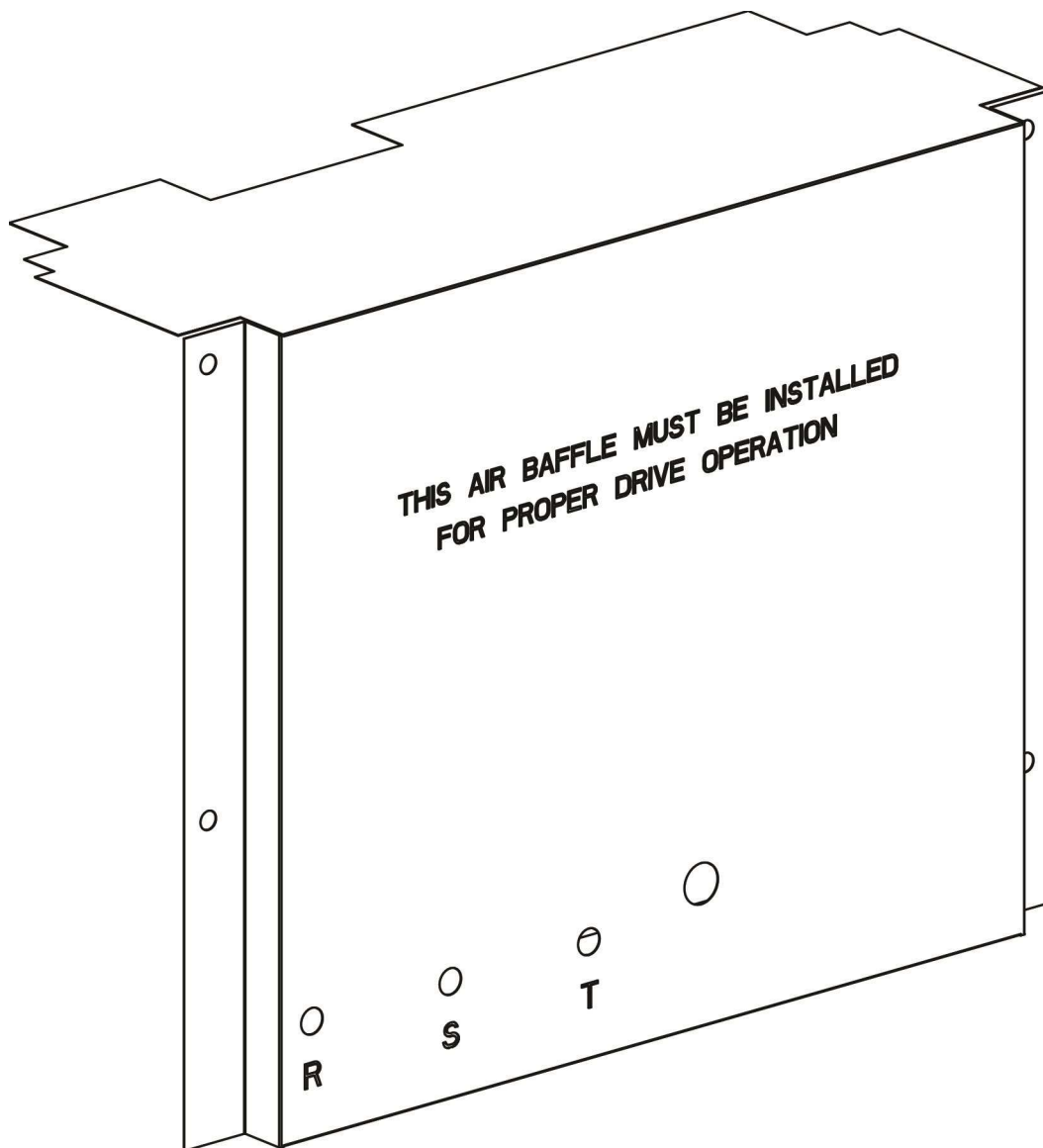
3.2.3 Control Card



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
CONTROL CARD FOR DTC-302	130B9990	N/A	Control card only. Specific to Turbocor products.

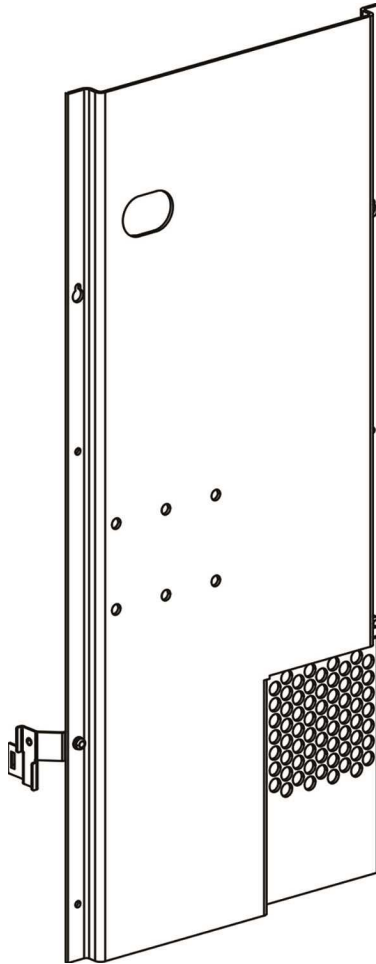


3.2.4 Air Baffle



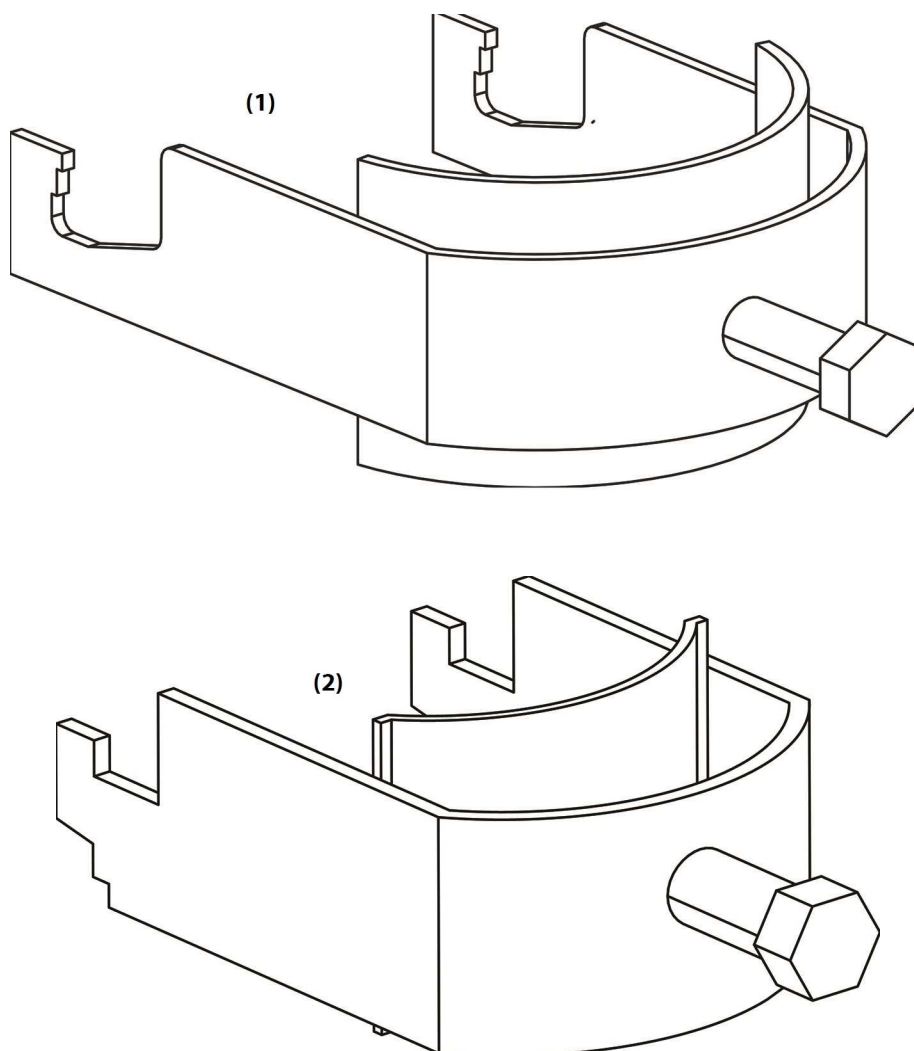
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - AIR BAFFLE D2H FRAME	176F3342	N/A	Air baffle only

3.2.5 Mains Shield



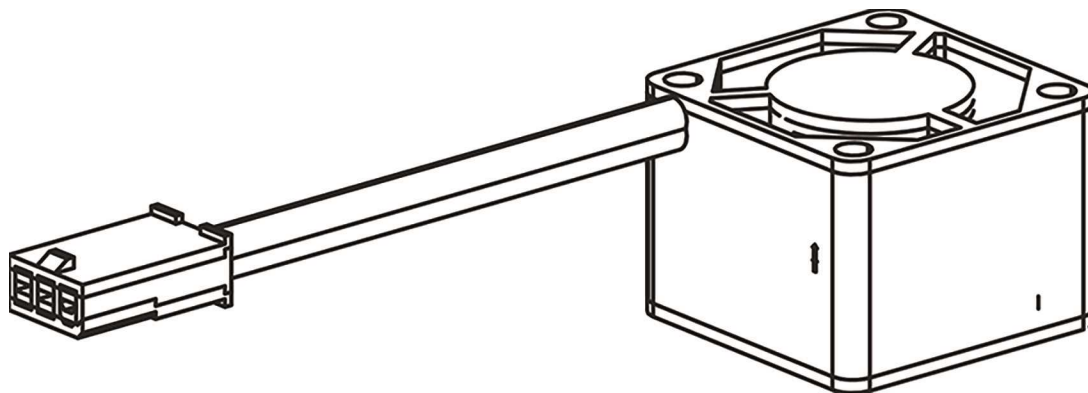
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - MAINS SHIELD D2H FRAME	176F3482	N/A	Shield, brackets, and fasteners

### 3.2.6 Cable Clamp



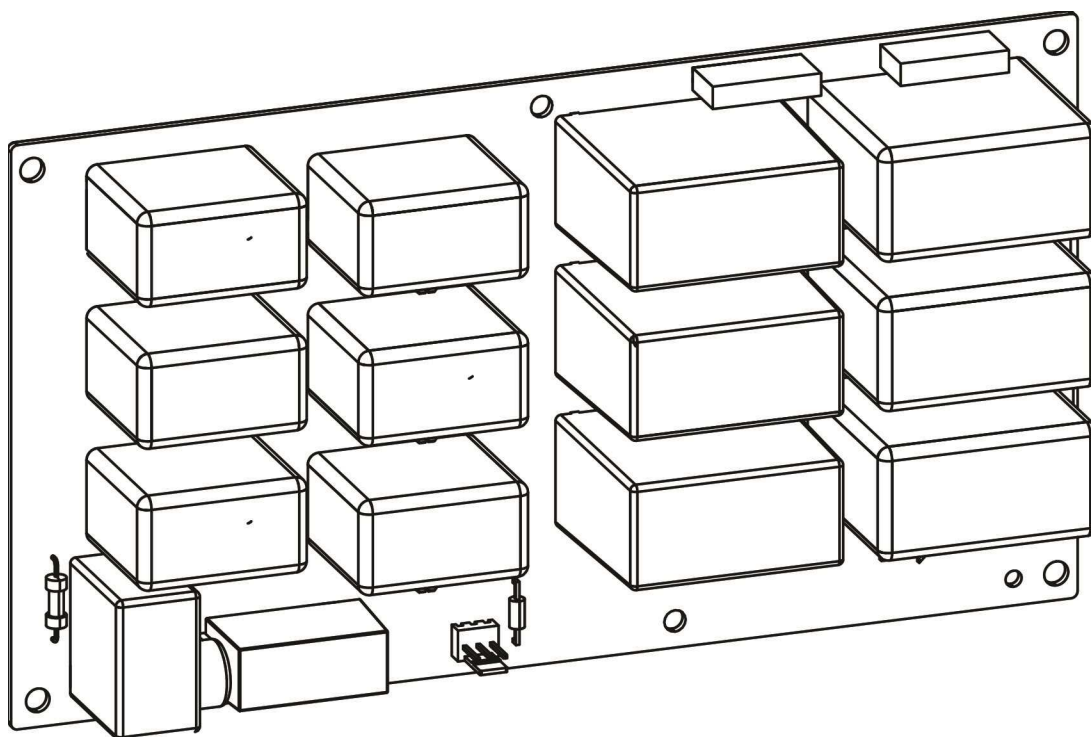
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - CABLE CLAMP FOR FRAME SIZE D & E 60mm	176F8430	N/A	Cable clamp only
(2) KIT - CABLE CLAMP 45mm DH FRAME	176F3345	N/A	Cable clamp only

3.2.7 Mixing Fan



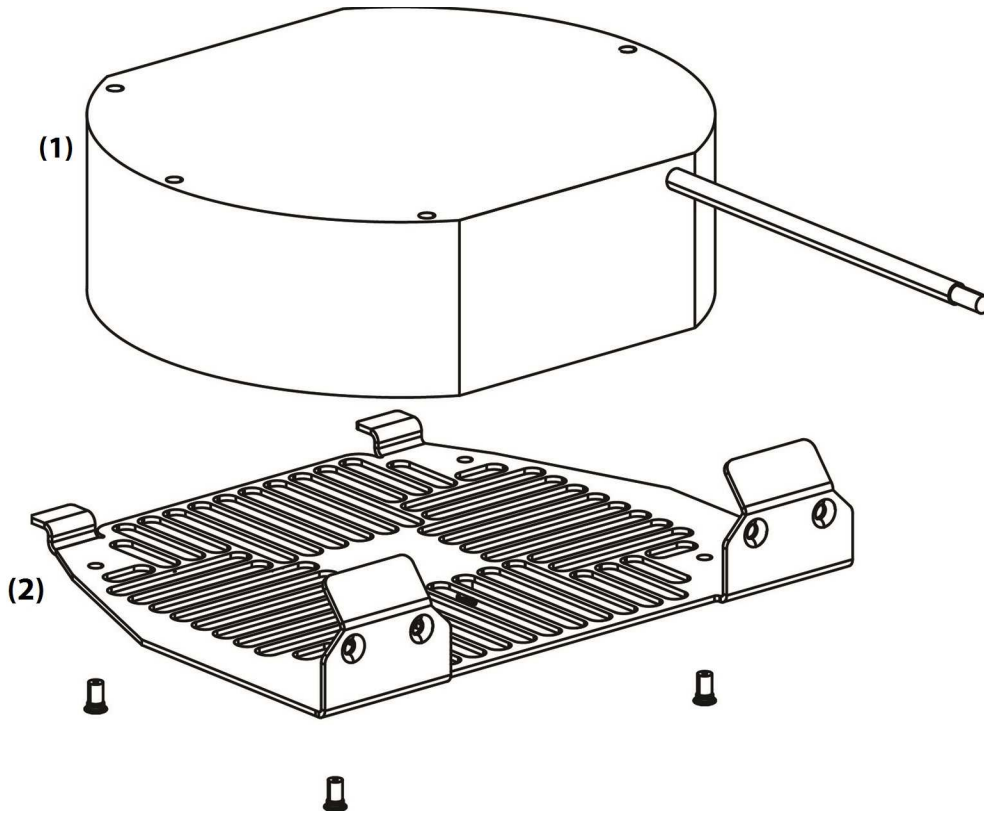
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - MIXING FAN DC 40X28 mm	176F3165	N/A	Mixing fan only

### 3.2.8 RFI Card



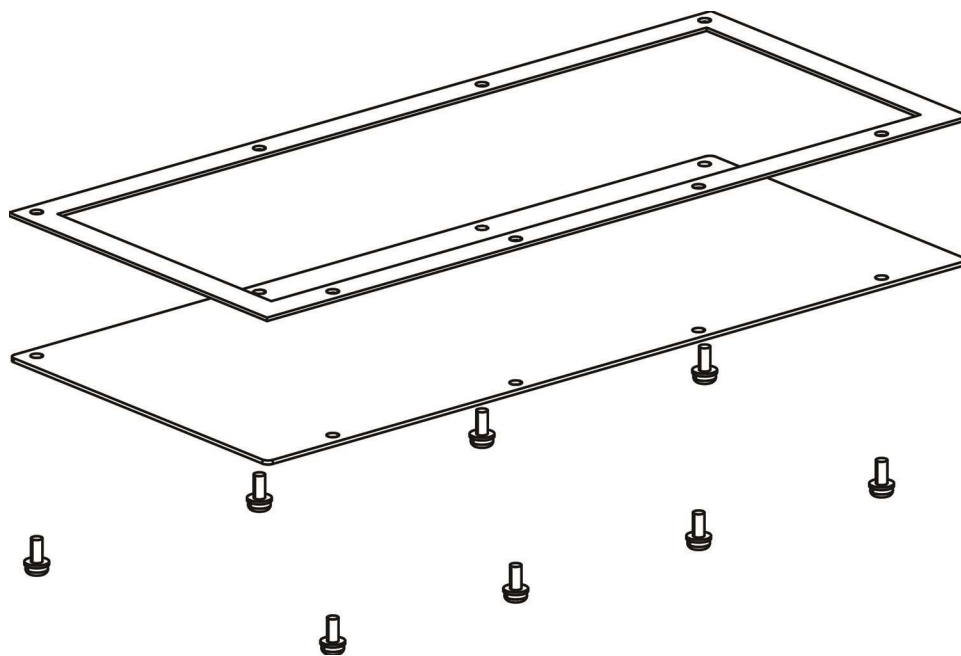
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - RFI CARD NO 110-315 KW 400V	176F3387	N/A	RFI card only Applies to drives with the H4 RFI option only

### 3.2.9 Heatsink Fan



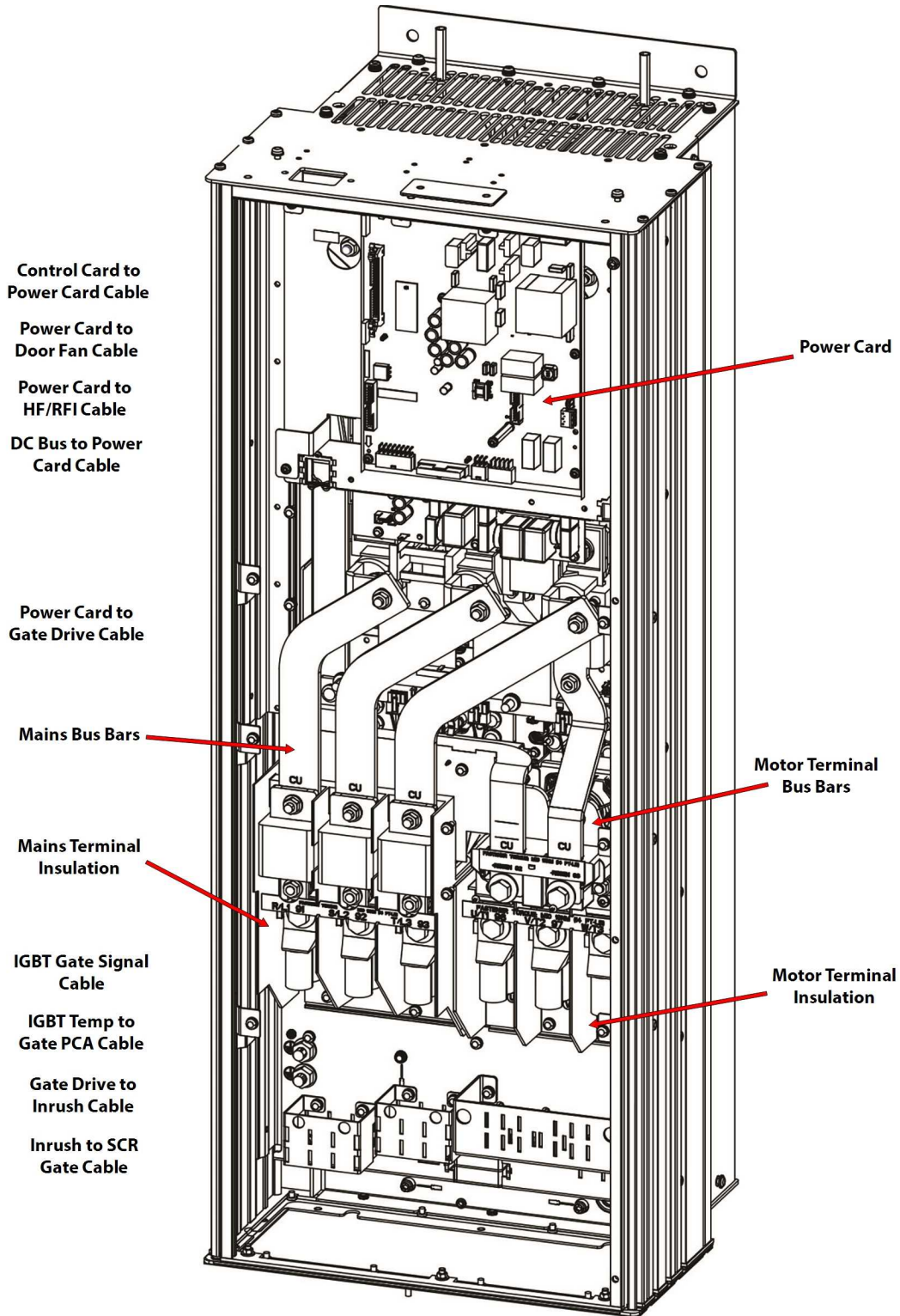
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - HEATSINK FAN DC 172X51 mm	176F3164	N/A	Heatsink fan only
(2) KIT - HEATSINK FAN COVER DH FRAMES	176F3540	N/A	Includes cover and fasteners

### 3.2.10 Gland Plate



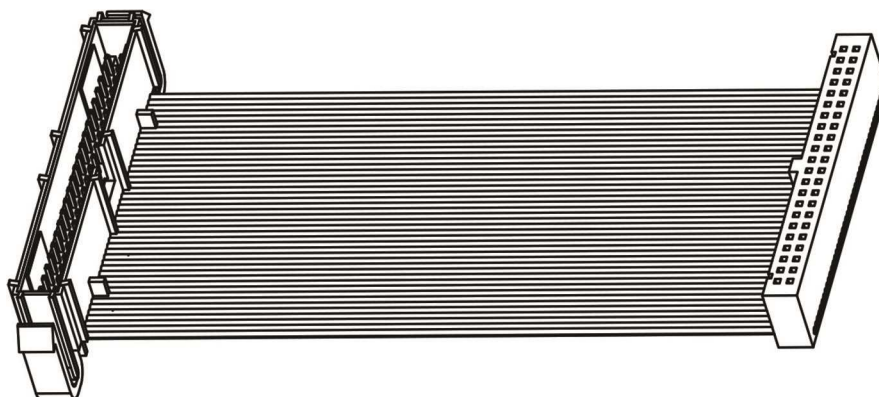
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - GLAND PLATE D2H FRAME	176F5742	N/A	Includes plate, gasket, and fasteners

3.3 VFD Internal Components Level 2



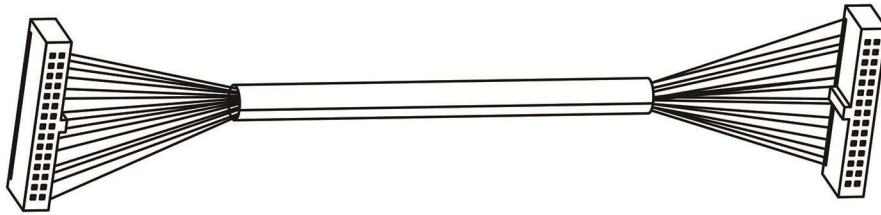


### 3.3.1 Control Card to Power Card Cable



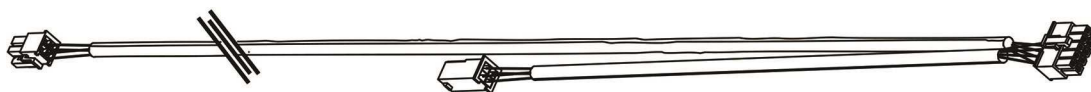
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE CONTROL CARD TO POWER CARD D2H/D4H	176F3319	N/A	Cable only

3.3.2 Power Card to Gate Drive Cable



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE POWER CARD TO GATE DRIVE D2H/D4H	176F3329	N/A	Cable only

**3.3.3 Power Card to Door Fan Cable**



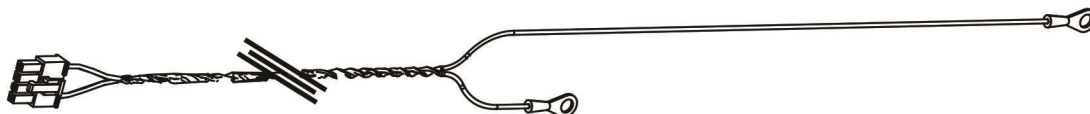
APPLIES TO: VTX1600 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE POWER CARD TO DOOR FAN D2H/D4H	176F3321	N/A	Cable only

3.3.4 Power Card to HF/ RFI Cable



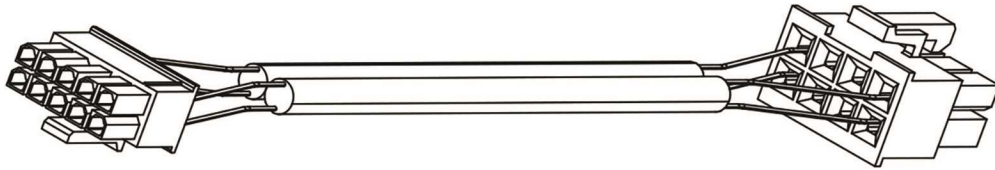
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE POWER CARD TO HF/ RFI D2H/D4H	176F3327	N/A	Cable only

### 3.3.5 DC Bus to Power Card Cable



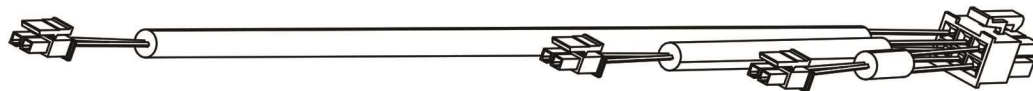
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE DC BUS TO POWER CARD D2H/D4H	176F3325	N/A	Cable only

**3.3.6 IGBT Gate Signal Cable**



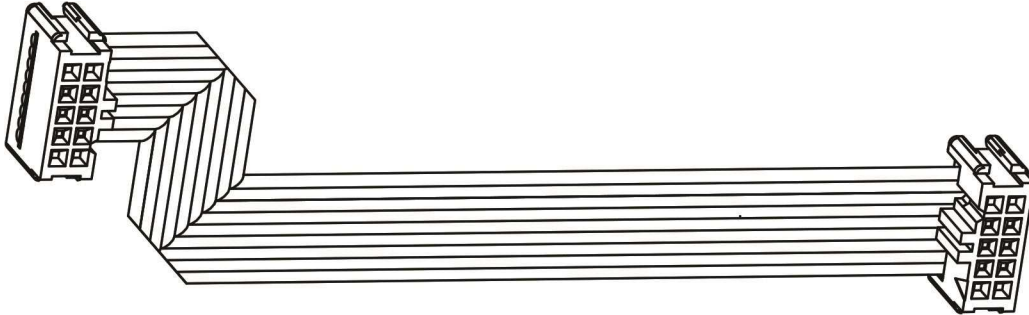
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE IGBT GATE SIGNAL D2H/D4H	176F3176	N/A	Cable only

### 3.3.7 IGBT Temp to Gate PCA Cable



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE IGBT TEMP TO GATE PCA D2H/D4H	176F3178	N/A	Cable only

3.3.8 Gate Drive to Inrush Cable



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE GATE DRIVE TO INRUSH D2H/D4H	176F3332	N/A	Cable only

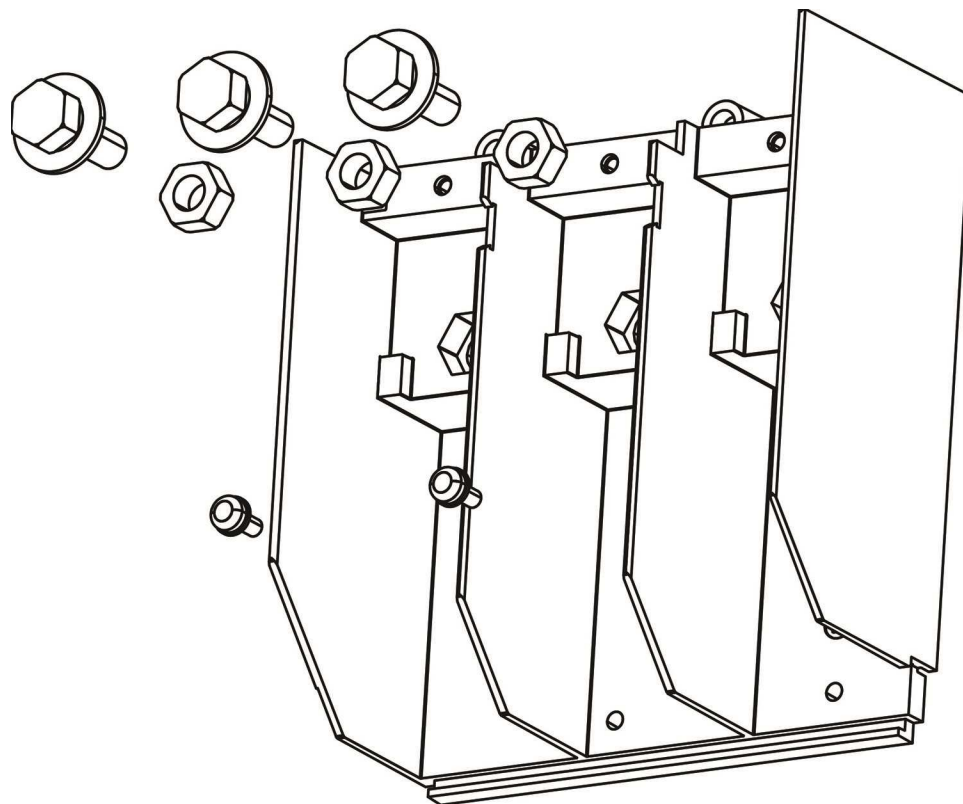


### 3.3.9 Inrush to SCR Gate Cable



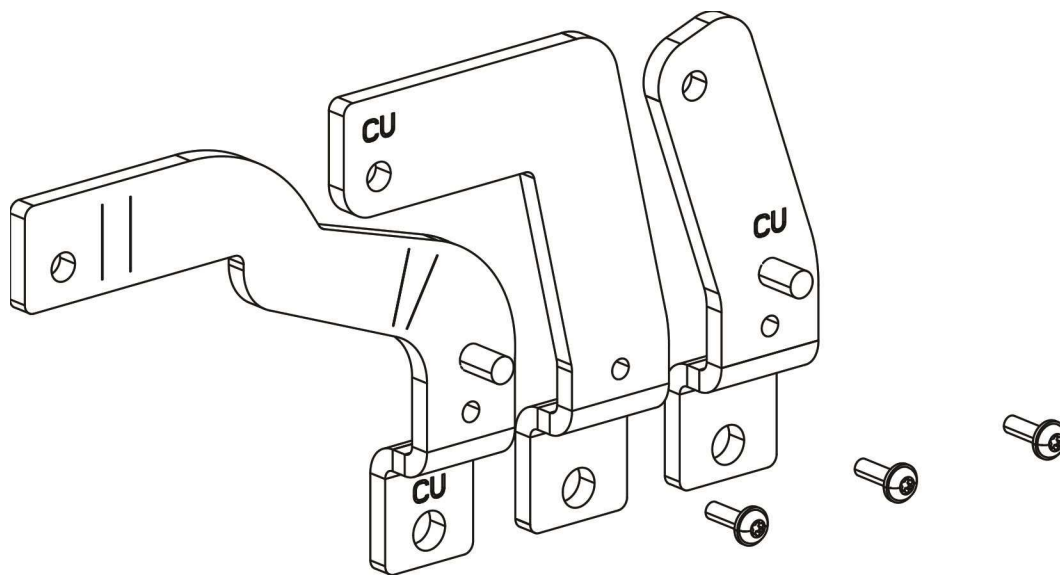
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - CABLE INRUSH TO SCR GATE D2H/D4H	176F3336	N/A	Cable only

3.3.10 Motor Terminal Insulation



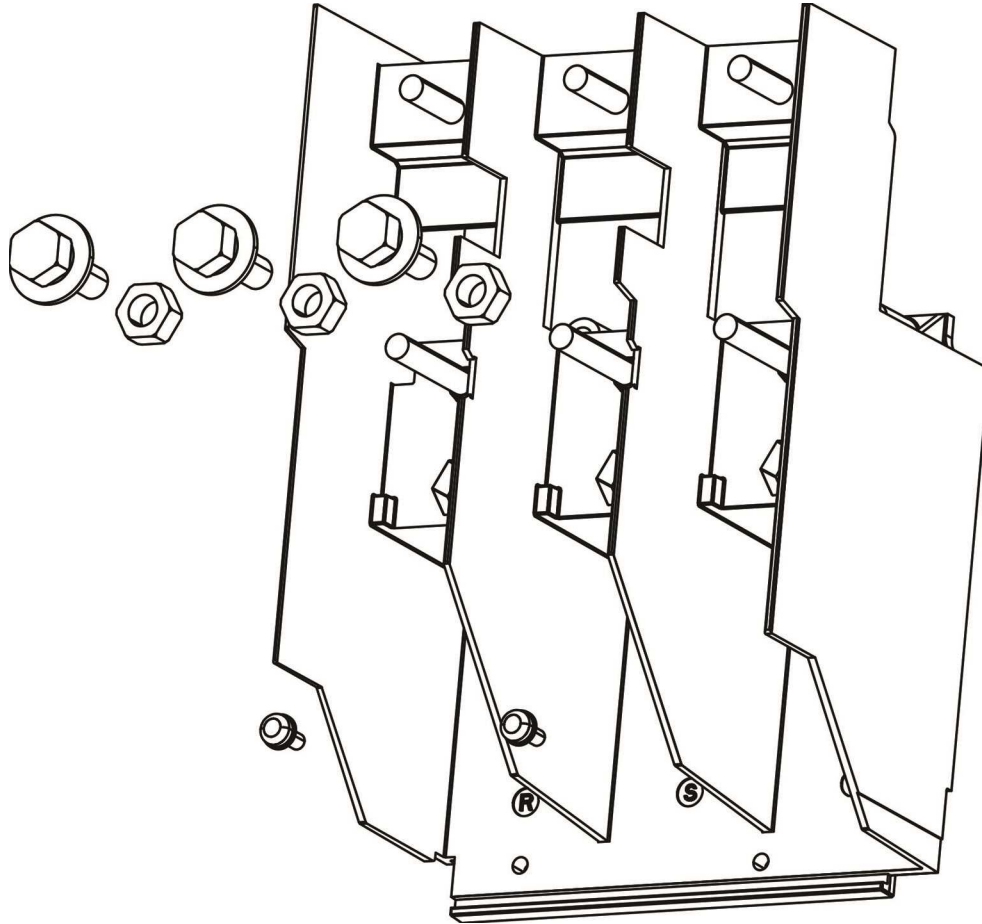
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - INSULATION MOTOR TERMINALS D2H/D4H	176F3370	N/A	Includes insulation and fasteners

### 3.3.11 Motor Terminal Bus Bar



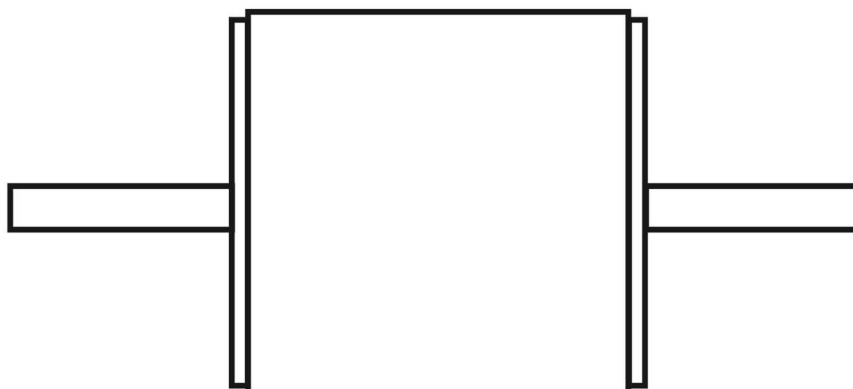
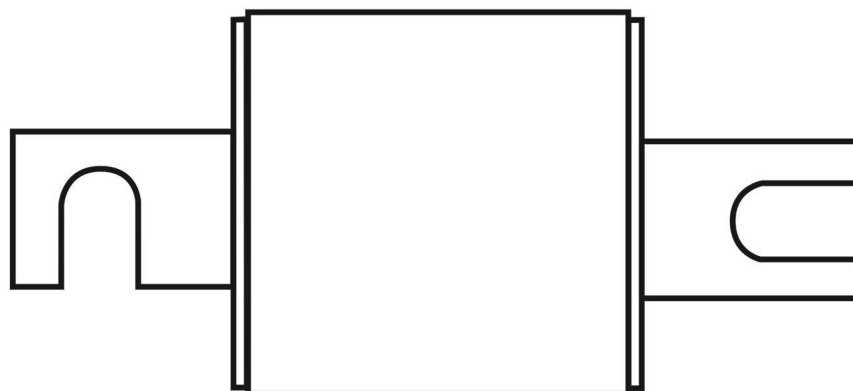
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - BUS BAR MOTOR TERMINALS U,V,W D2H/D4H	176F3368	N/A	Includes insulation and fasteners

3.3.12 Mains Terminal Insulation



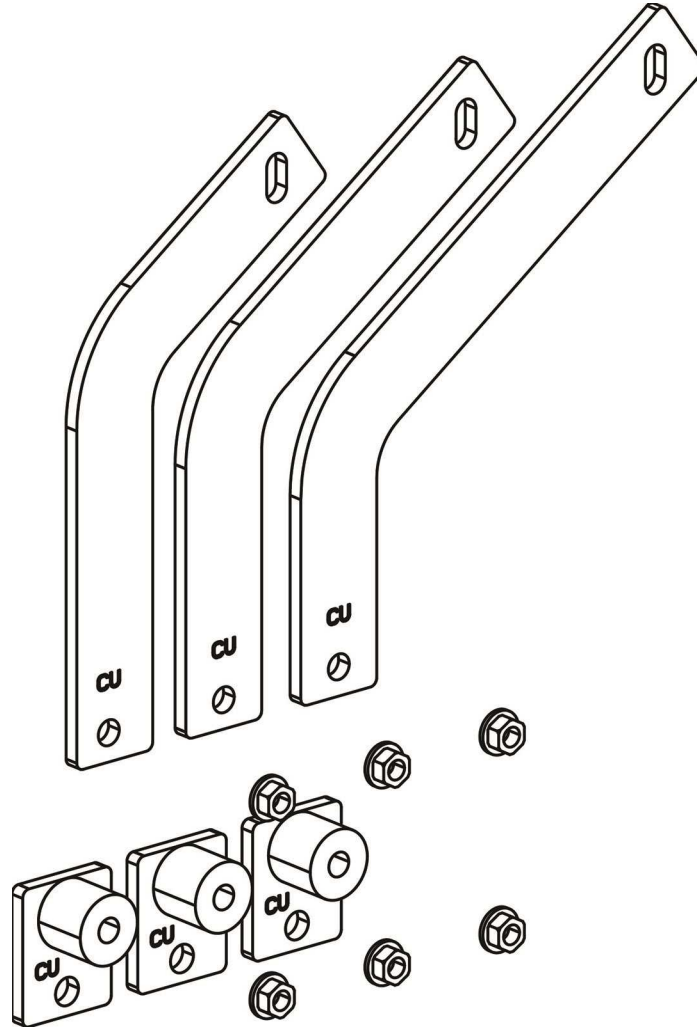
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - INSULATION MAINS TERMINALS D2H/D4H	176F3369	N/A	Includes insulation and fasteners

3.3.13 Main Fuse



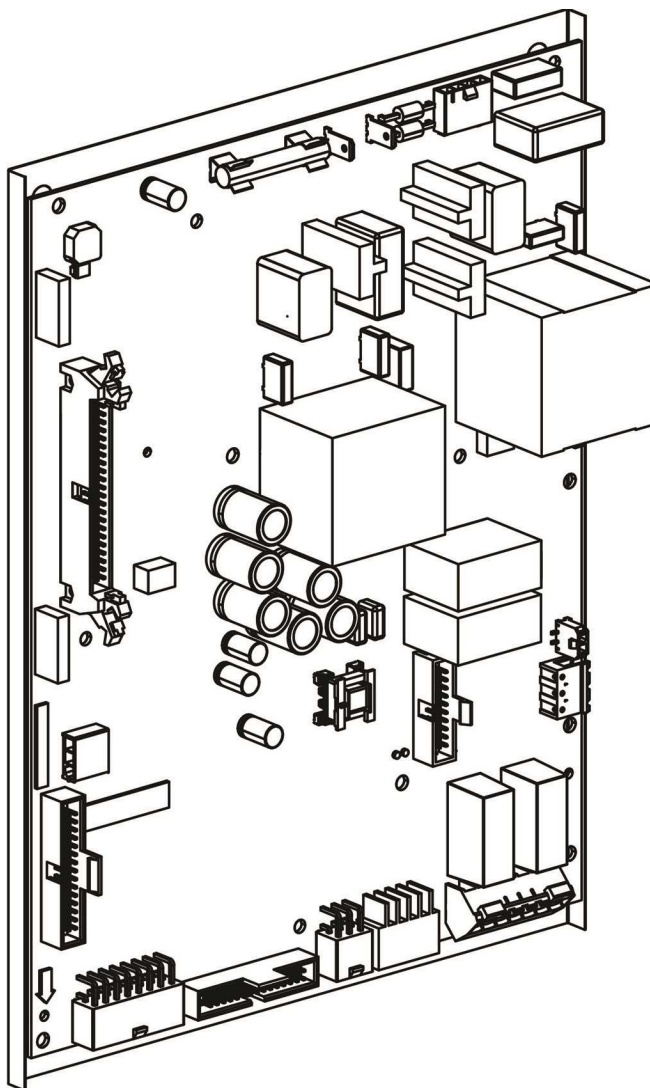
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - MAINS FUSE, 630A, 700V, SQUARE BODY	176F8335	N/A	Includes one (1) fuse

3.3.14 Mains Bus Bar



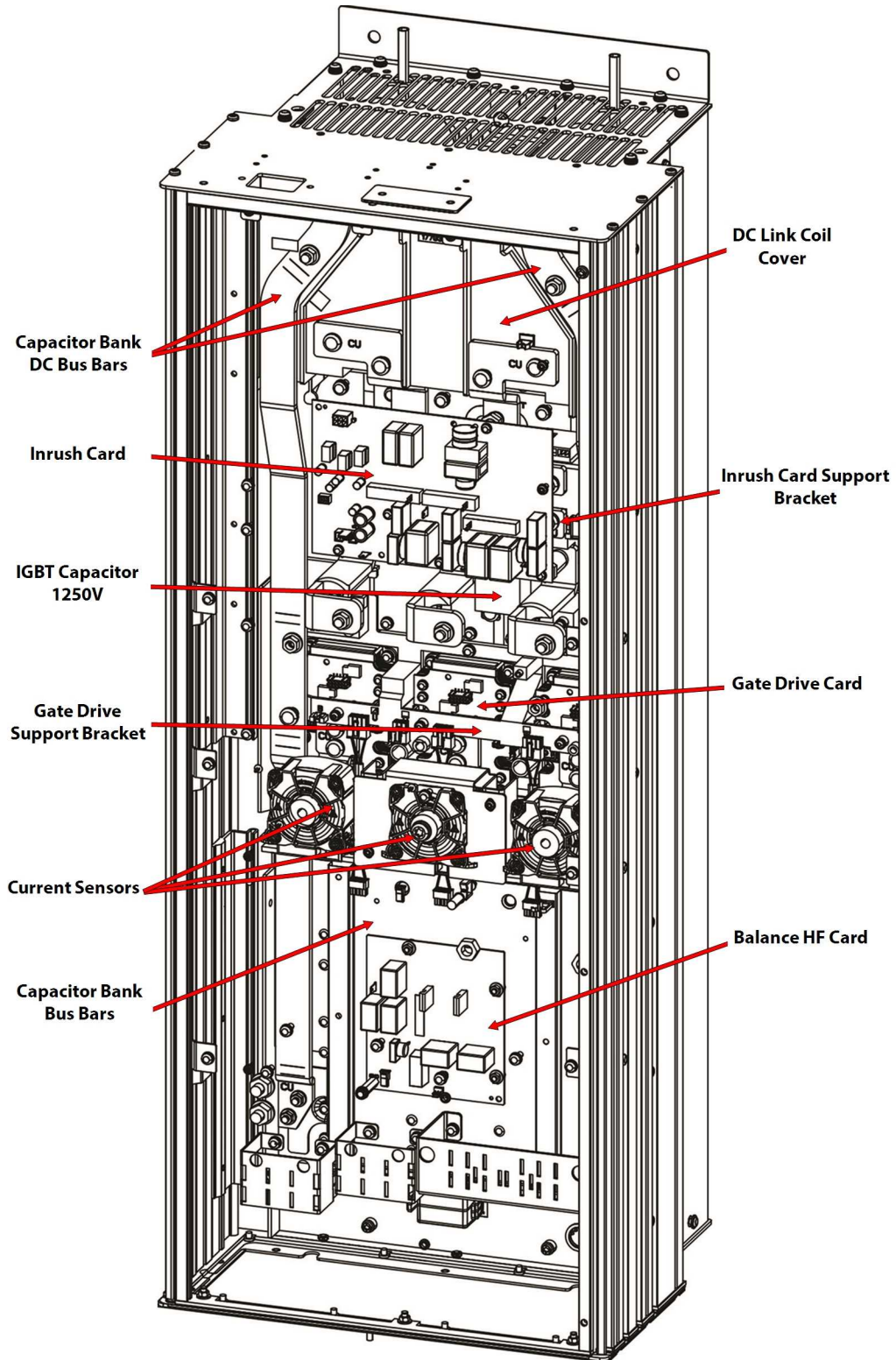
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - BUS BAR MAINS,FUSE,NO RFI D2H/D4H	176F3372	N/A	Includes large bus bars, small fuse bus bars, and fasteners
KIT - BUS BAR MAINS,FUSE,RFI D2H/D4H	176F3374	N/A	Includes small fuse bus bars and fasteners only

### 3.3.15 Power Card



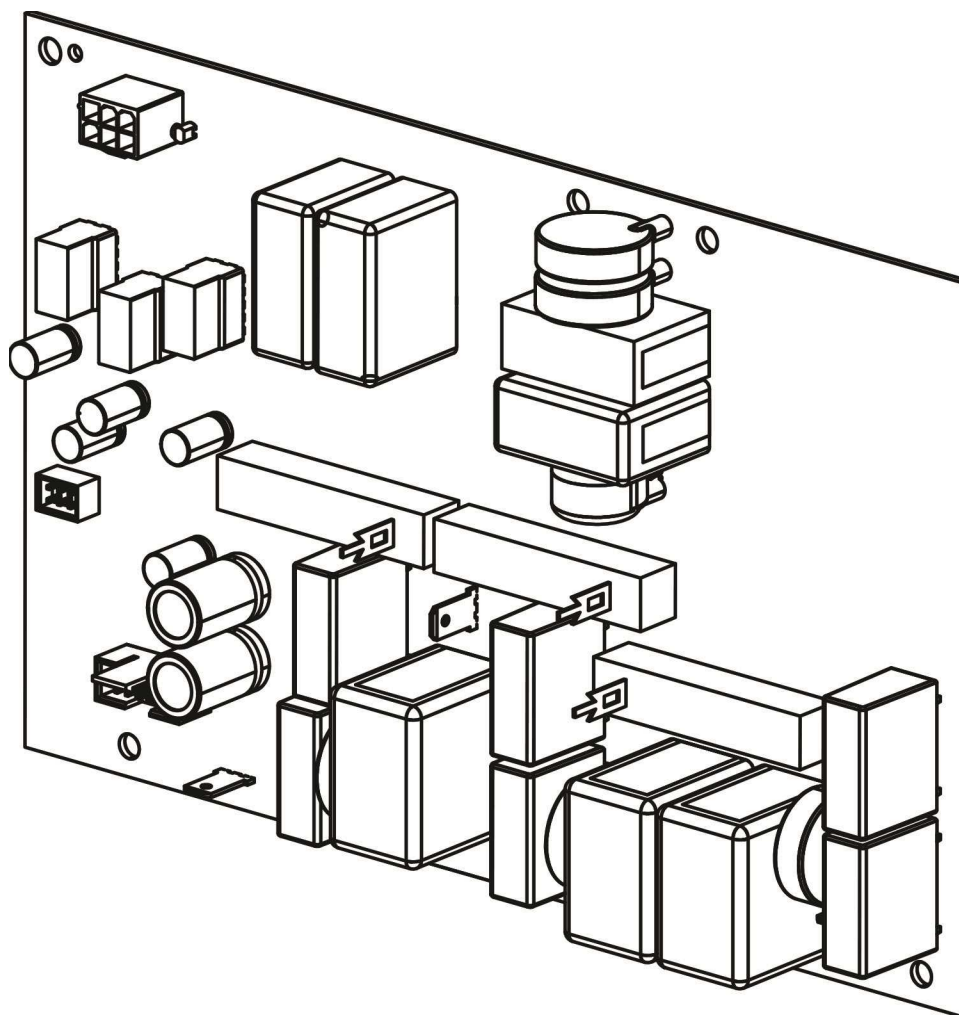
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - POWER CARD TURBOCOR N262 380-500 VAC	176F6445	N/A	Includes power card only. Specific to Turbocor products.

3.4 VFD Internal Components Level 3



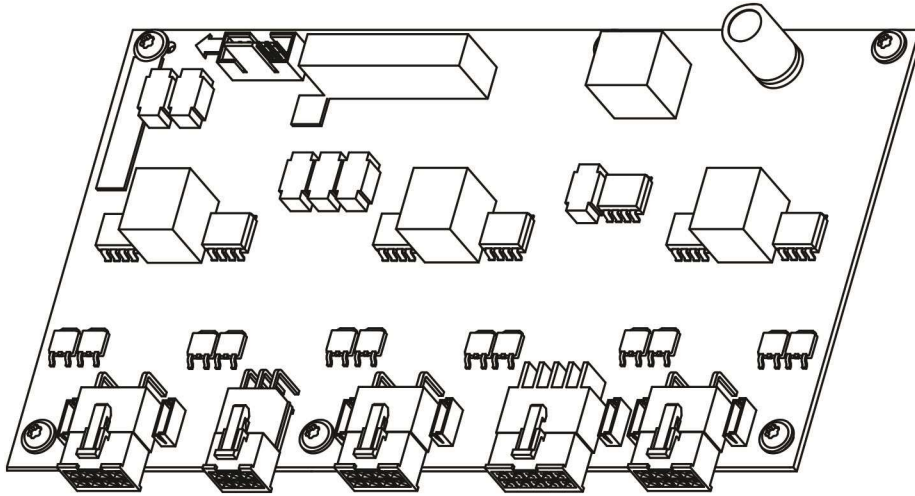


3.4.1 Inrush Card



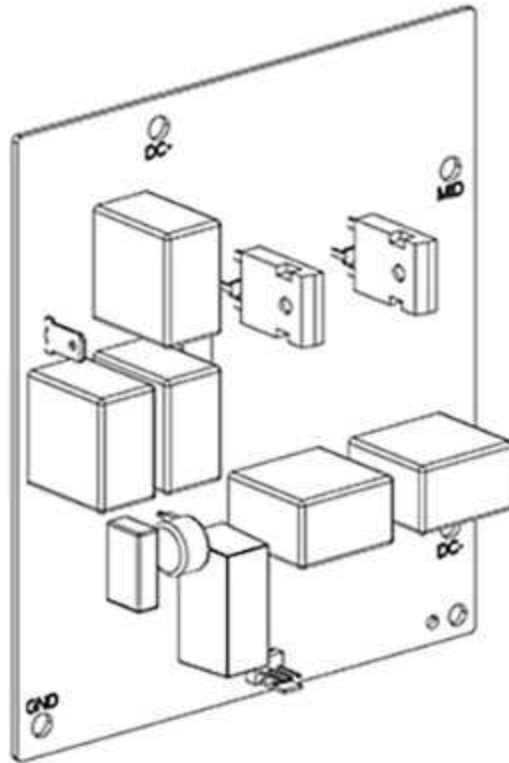
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - INRUSH CARD NO 110-315KW 400V	176F3159	N/A	Card only

3.4.2 Gate Drive Card



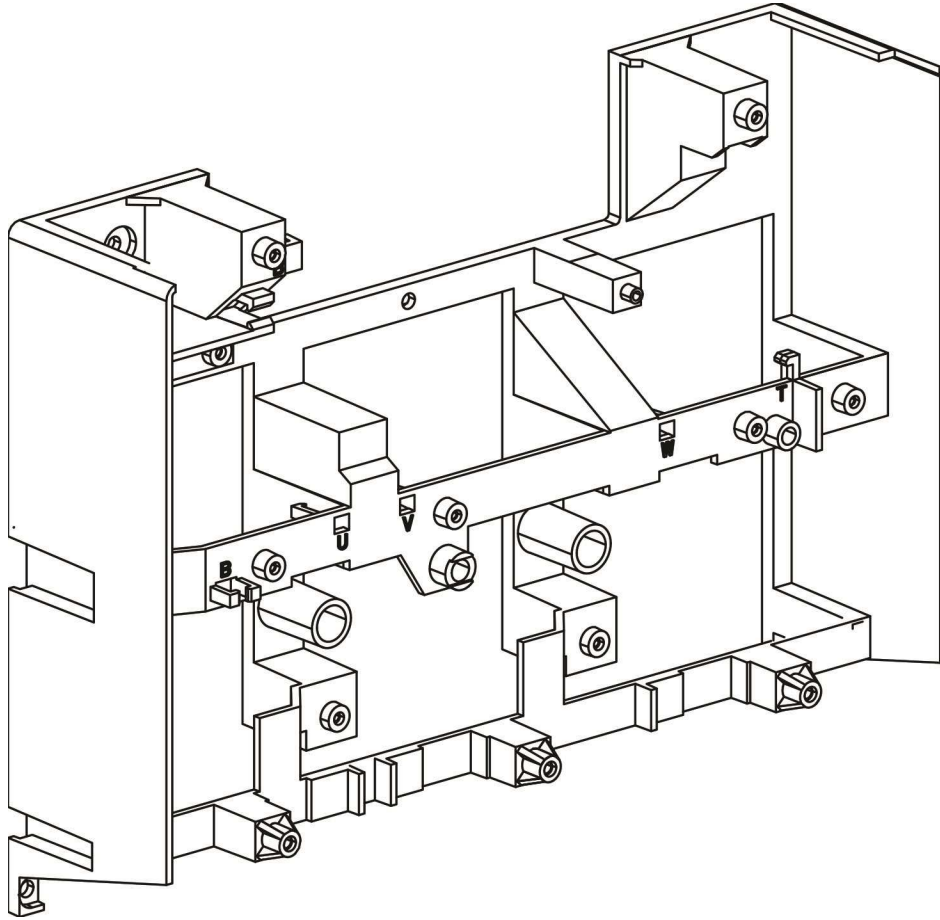
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - GATE DRIVE CARD NO 110- 315KW 400V	176F3160	N/A	Card only

3.4.3 Balance/HF Card



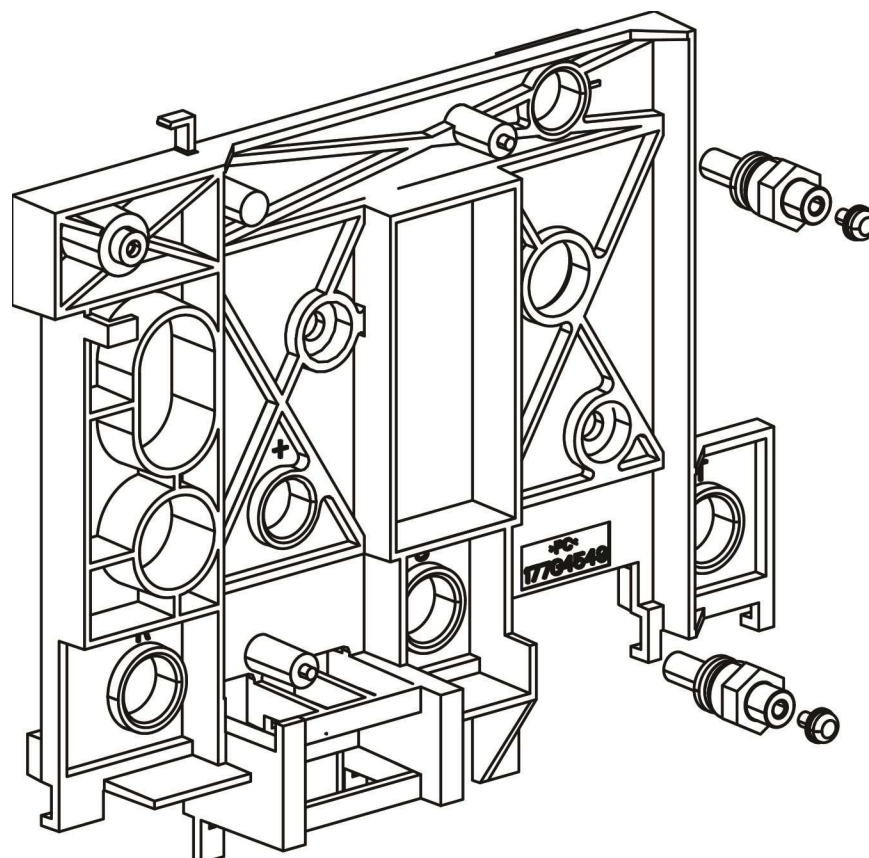
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - BALANCE/HF CARD NO 110- 315KW 400V	176F3161	N/A	Card only

**3.4.4 Gate Drive Support Bracket**



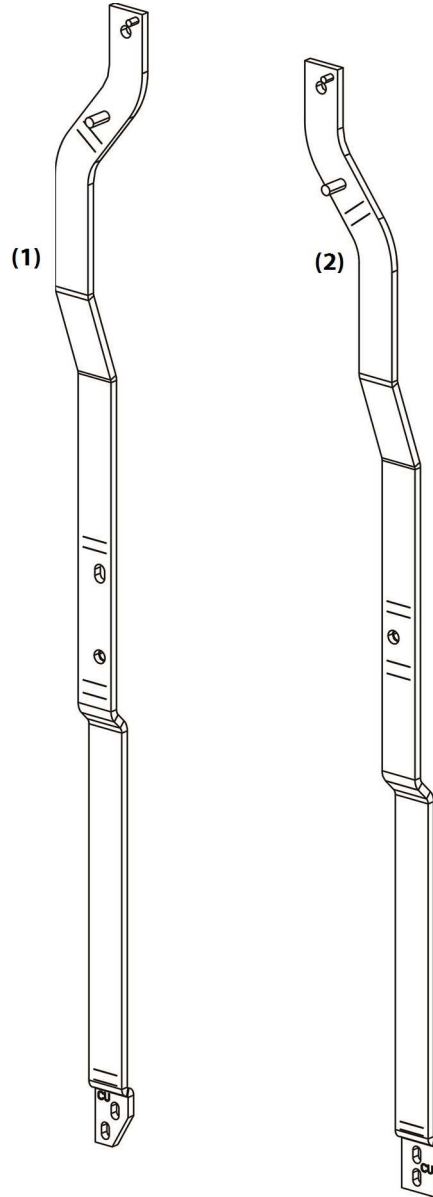
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - BRACKET GATE DRIVE SUPPORT D2H/D4H	176F3344	N/A	Bracket only

### 3.4.5 Inrush Card Support Bracket



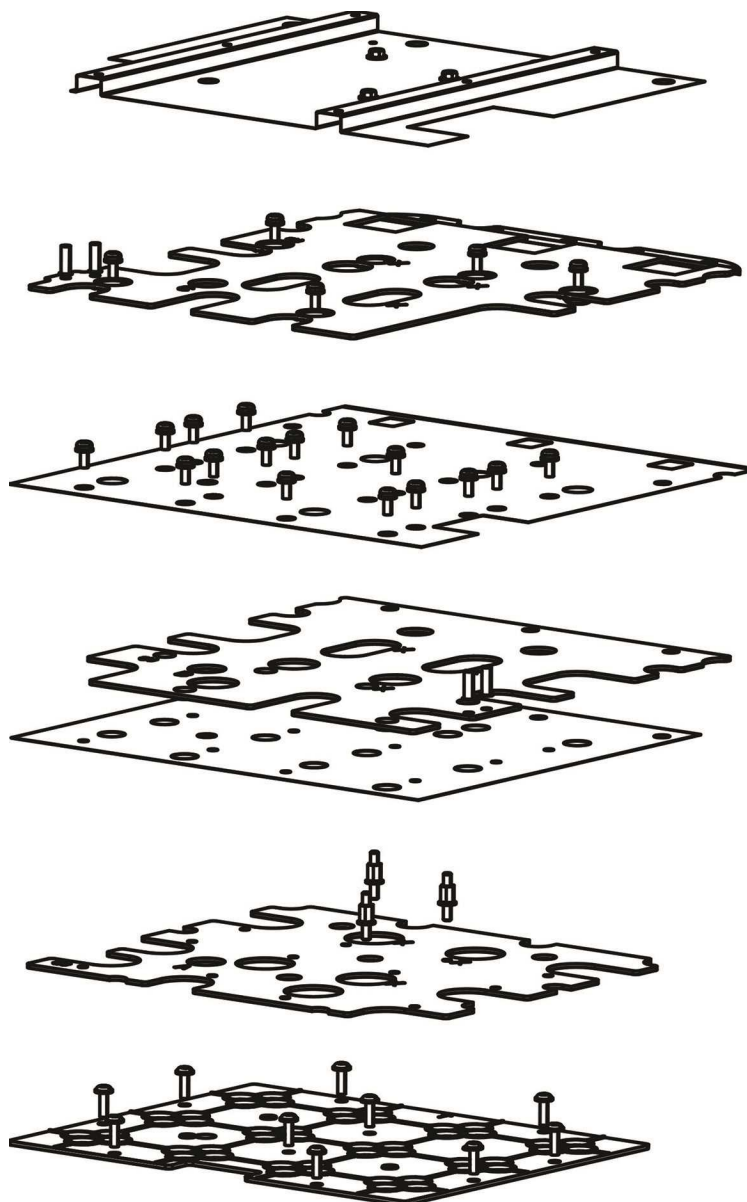
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - BRACKET INRUSH SUPPORT D2H/D4H	176F3361	N/A	Includes bracket and fasteners

### 3.4.6 Capacitor Bank DC Bus Bar



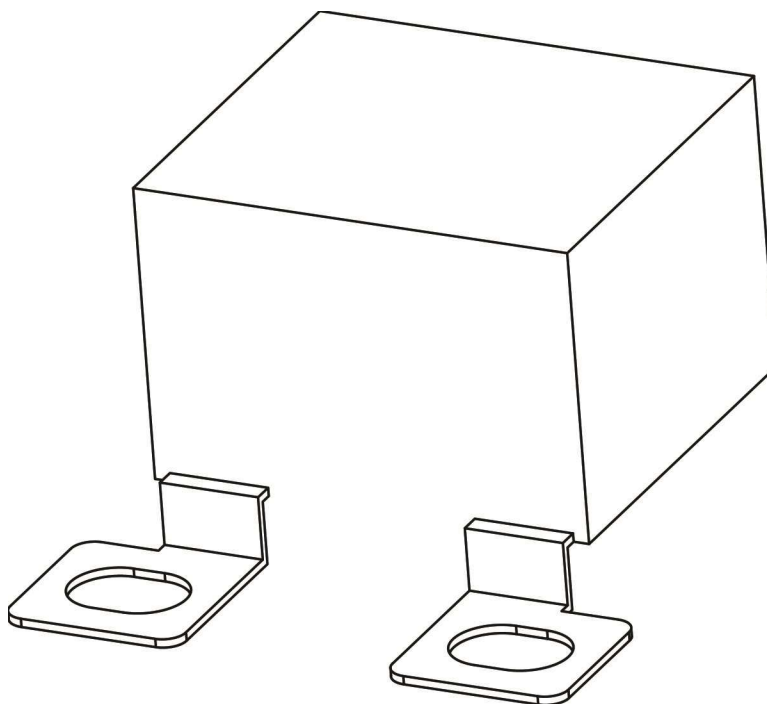
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - BUS BAR DC+ INDUCTOR TO CAP BANK D2H/D4H	176F3382	N/A	Includes left bus bar only
(2) KIT - BUS BAR DC- INDUCTOR TO CAP BANK D2H/D4H	176F3383	N/A	Includes right bus bar only

### 3.4.7 Capacitor Bank Bus Bar



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - BUS BAR ASSEMBLY CAP BANK 400V D2H/D4H	176F3386	N/A	Includes bus bar plates, insulation and fasteners

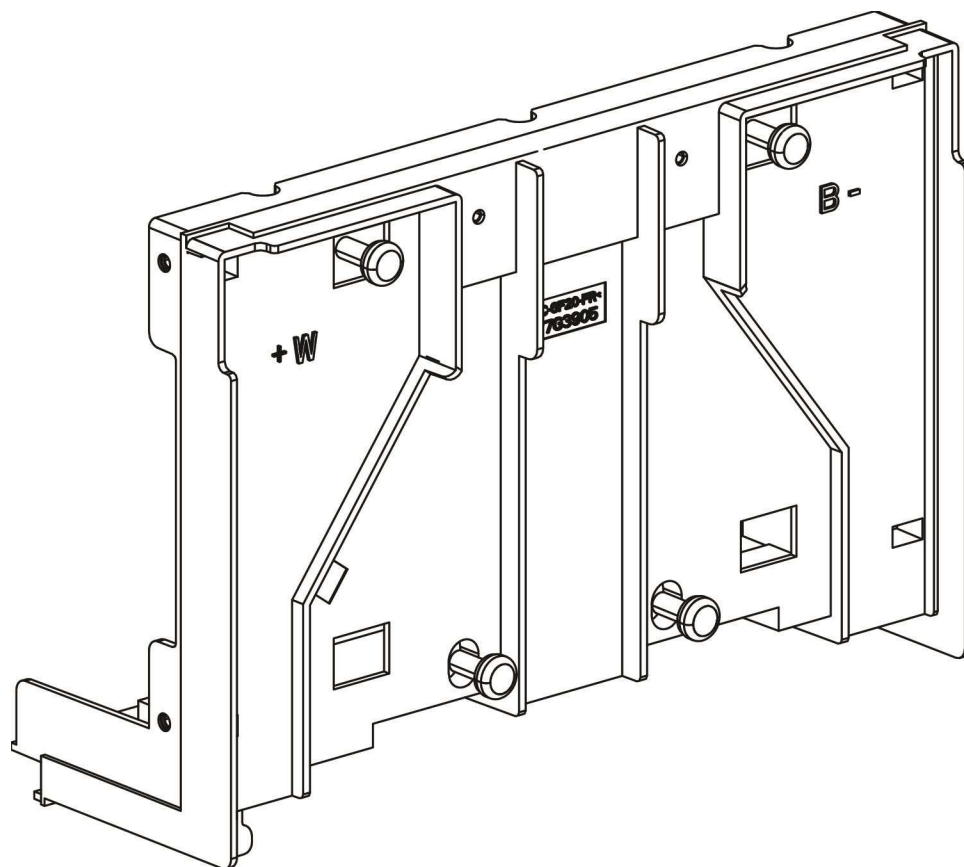
3.4.8 IGBT Capacitor 1250V



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - IGBT SNUBBER CAP 1250V 1.0 $\mu$ F WIDE MOUNT	176F3427	N/A	Capacitor only

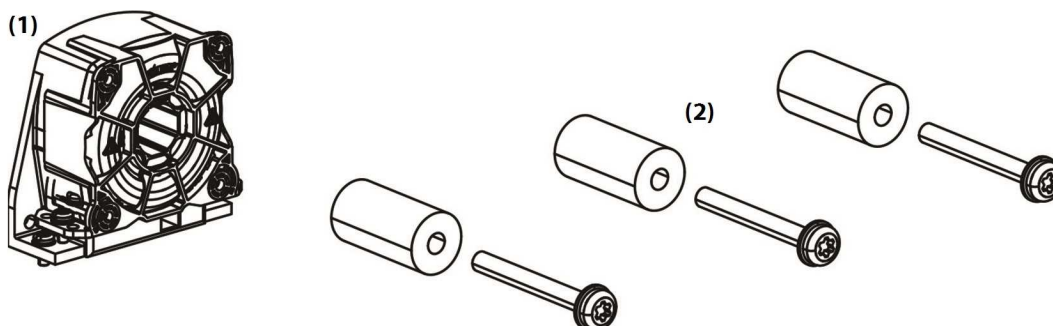


### 3.4.9 DC Link Coil Cover



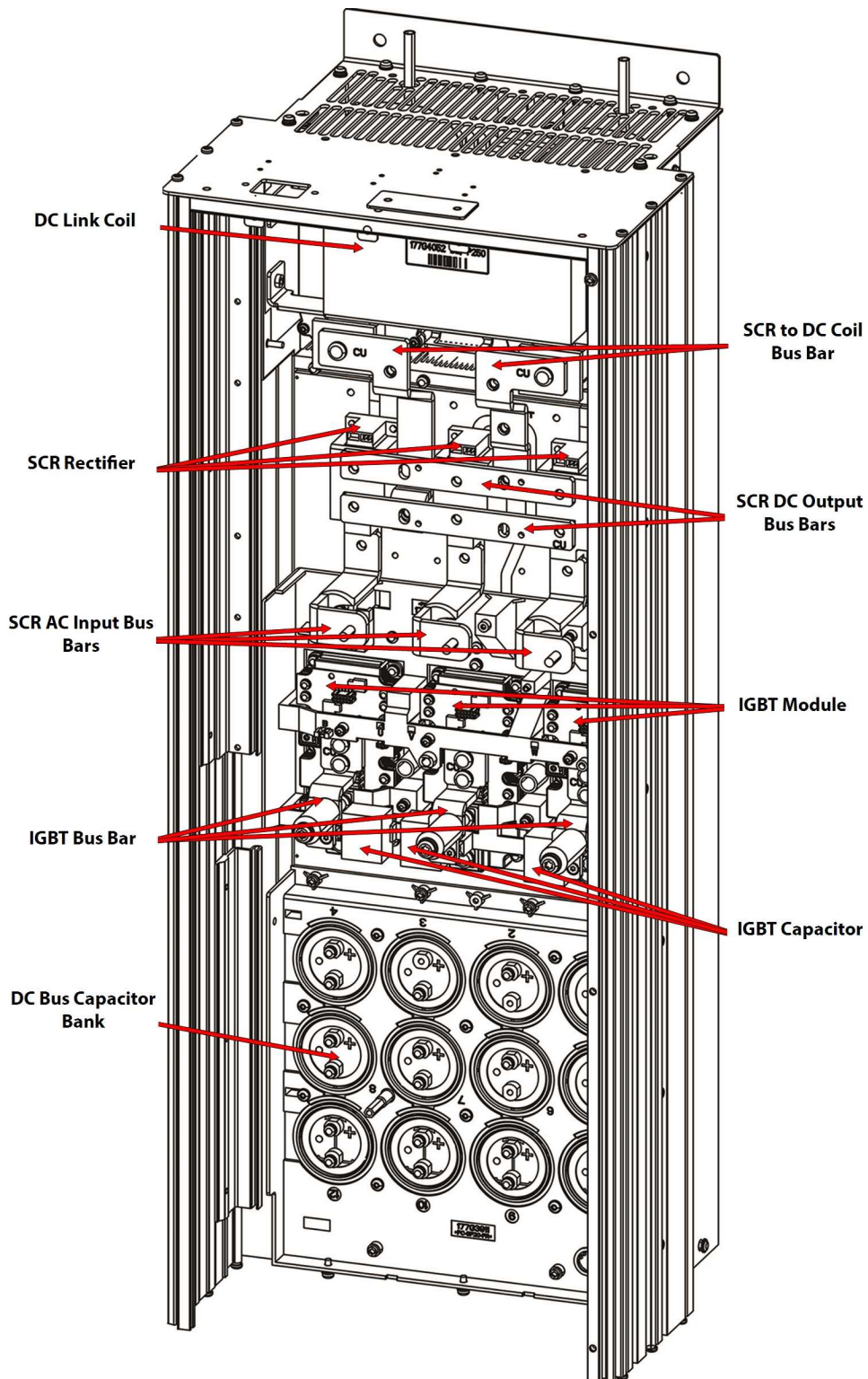
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - COVER DC LINK COIL LARGE DH FRAME	176F3548	N/A	Includes cover and fasteners

3.4.10 Current Sensor

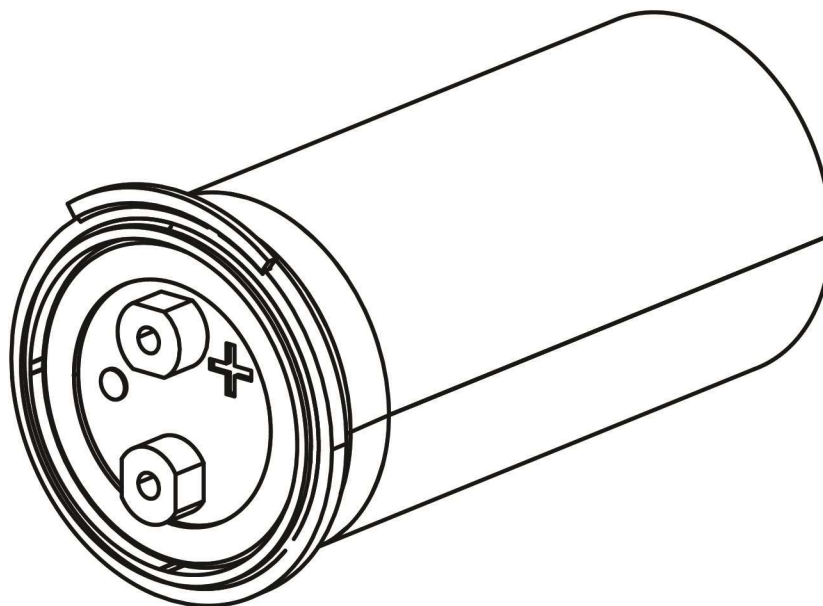


APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - CURRENT SENSOR	176F6447	N/A	One current sensor
(2) KIT - BUS BAR ASSEMBLY CURRENT SENSOR D2H/D4H	176F3385	N/A	Includes three current sensor bus bars and fasteners

### 3.5 VFD Internal Components Level 4

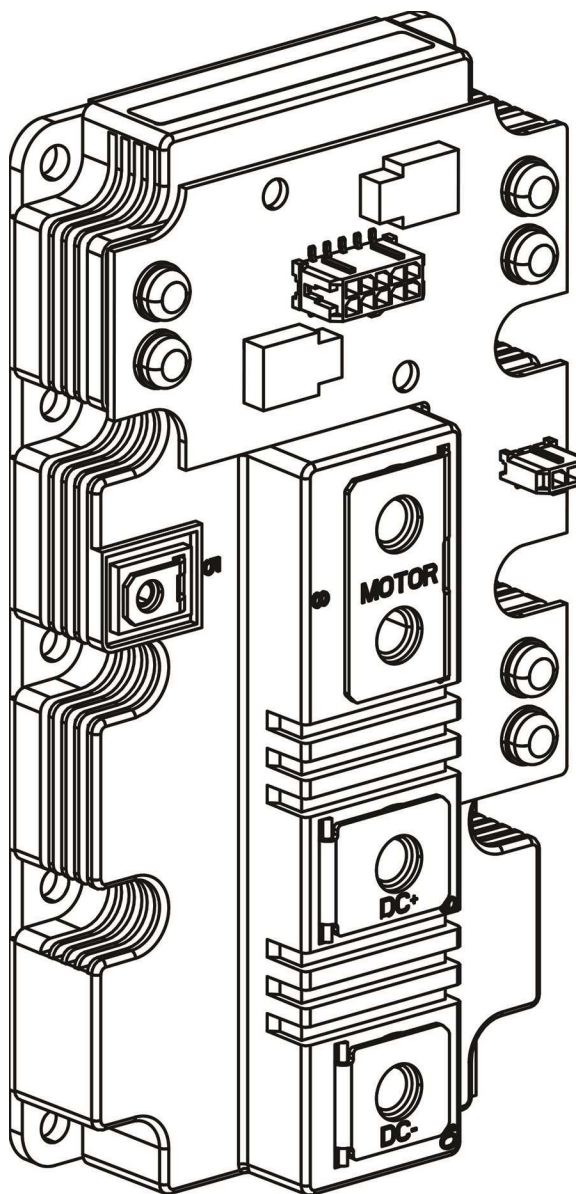


3.5.1 DC Bus Capacitor



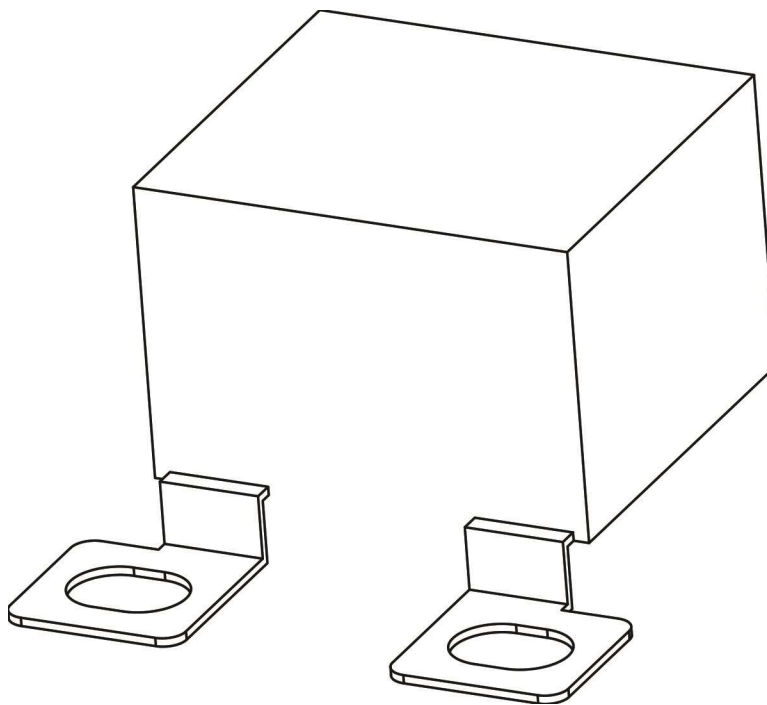
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - DC BUS CAP 4700 $\mu$ F 450V SINGLE IN HOUSING	176F3163	N/A	Includes one capacitor and one gasket

### 3.5.2 IGBT Module



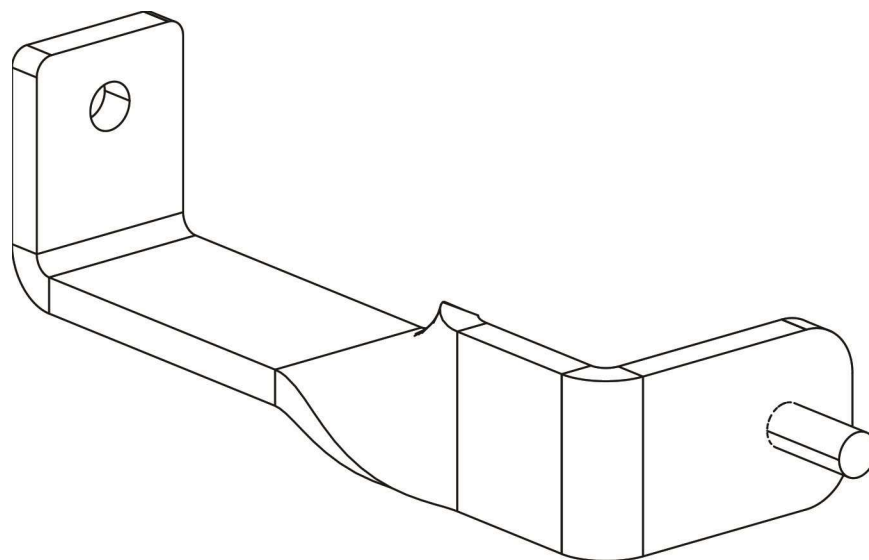
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - IGBT DUAL MODULE 900AMP T4/T5 DRIVE	176F3365	N/A	Includes IGBT and fasteners

3.5.3 IGBT Capacitor



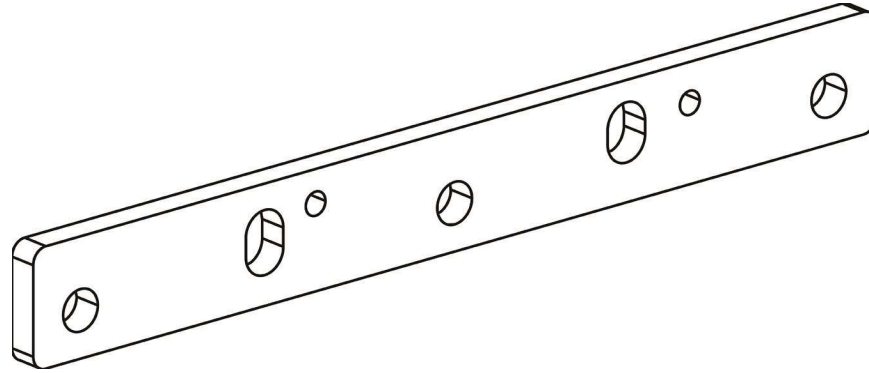
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - IGBT SNUBBER CAP 1000V 1.5 $\mu$ F WIDE MOUNT	176F3162	N/A	Capacitor only

**3.5.4 SCR AC Input Bus Bar**



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - BUS BAR SCR AC INPUT SMALL D2H/D4H	176F3376	N/A	One bus bar only

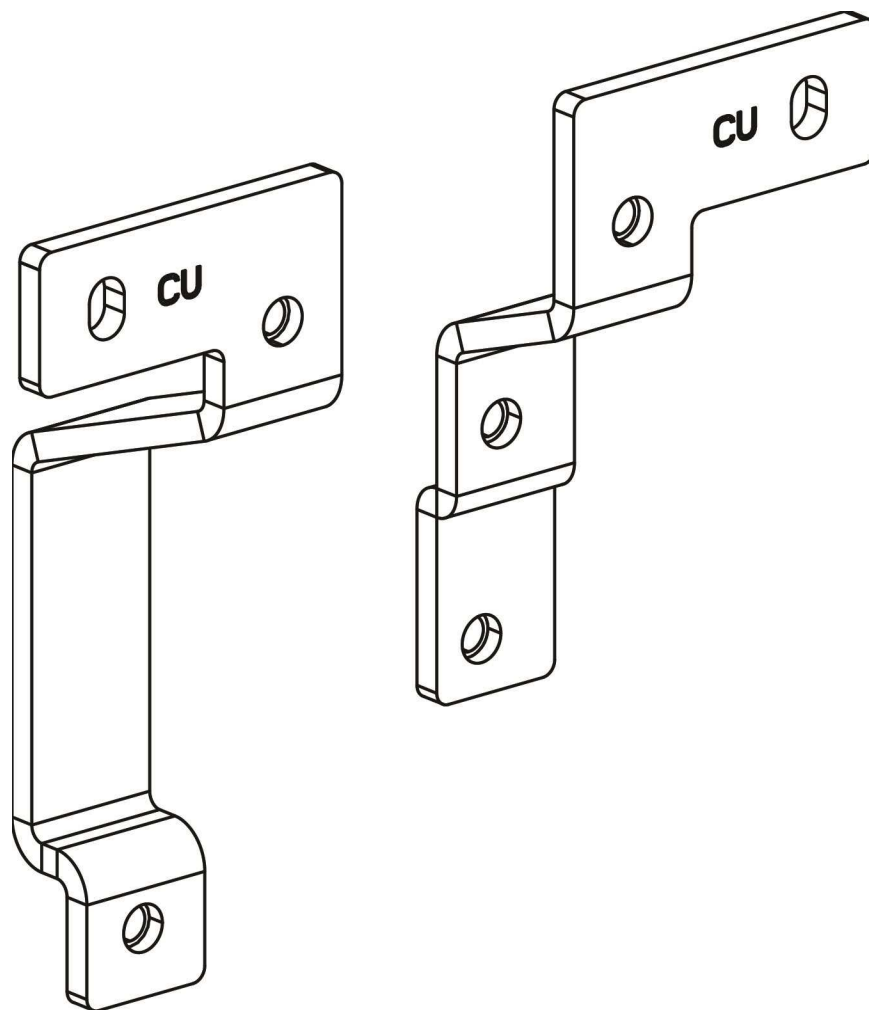
**3.5.5 SCR DC Output Bus Bar**



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - BUS BAR SCR DC OUTPUT SMALL D2H/D4H	176F3378	N/A	One bus bar only

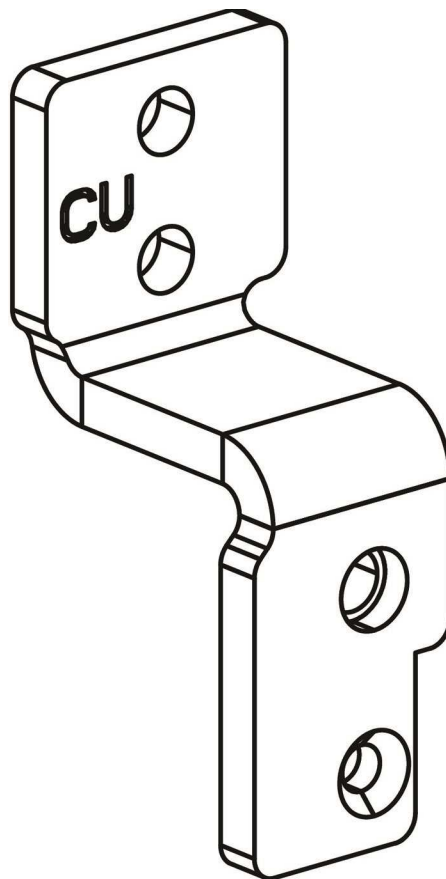


### 3.5.6 SCR to DC Coil Bus Bar



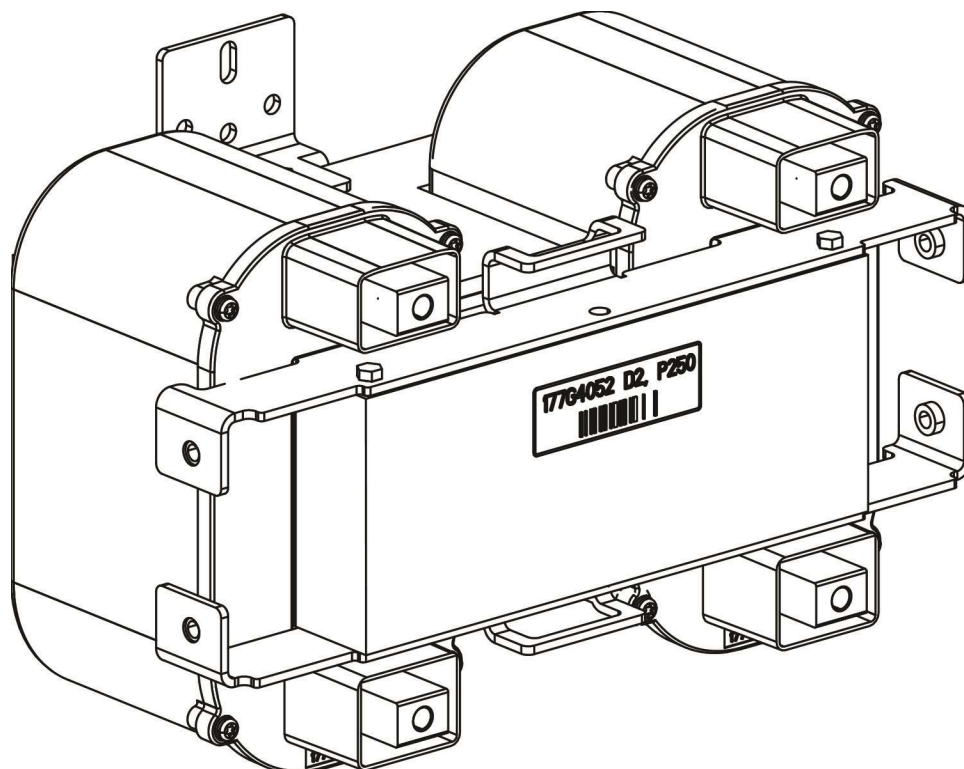
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
(1) KIT - BUS BAR DC+ SCR TO DC COIL D2H/D4H	176F3380	N/A	Includes left bus bar only
(2) KIT - BUS BAR DC- SCR TO DC COIL D2H/D4H	176F3381	N/A	Includes right bus bar only

3.5.7 IGBT Bus Bar



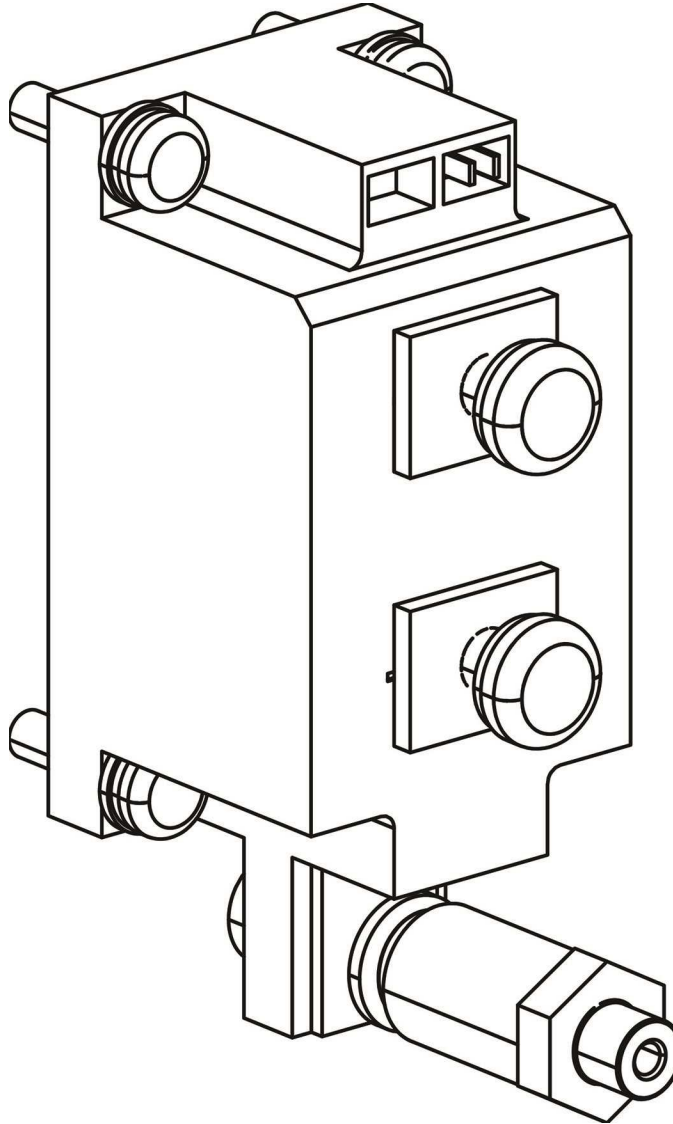
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - BUS BAR IGBT AC OUTPUT D2H/D4H	176F3384	N/A	One bus bar only

### 3.5.8 DC Link Coil



APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - DC LINK COIL LARGE DH FRAME 65 $\mu$ H	176F5724	N/A	DC link coil assembly only

3.5.9 SCR Rectifier

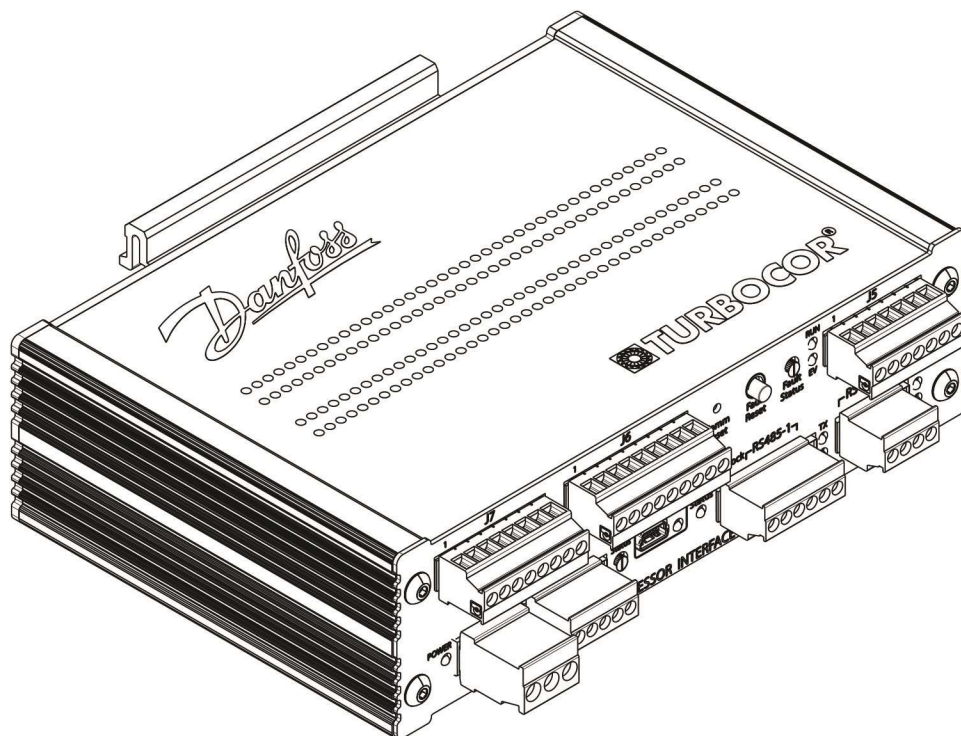


APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT - RECTIFIER SCR 330A 1600V	176F8320	N/A	Includes SCR rectifier and fasteners

## Chapter 4.0 External Modules/Components

### 4.1 Compressor Interface Module (CIM)

The Compressor Interface Module (CIM) is where all field connections, such as RS485, EXV and analog / digital wiring, is made to communicate with the compressor.

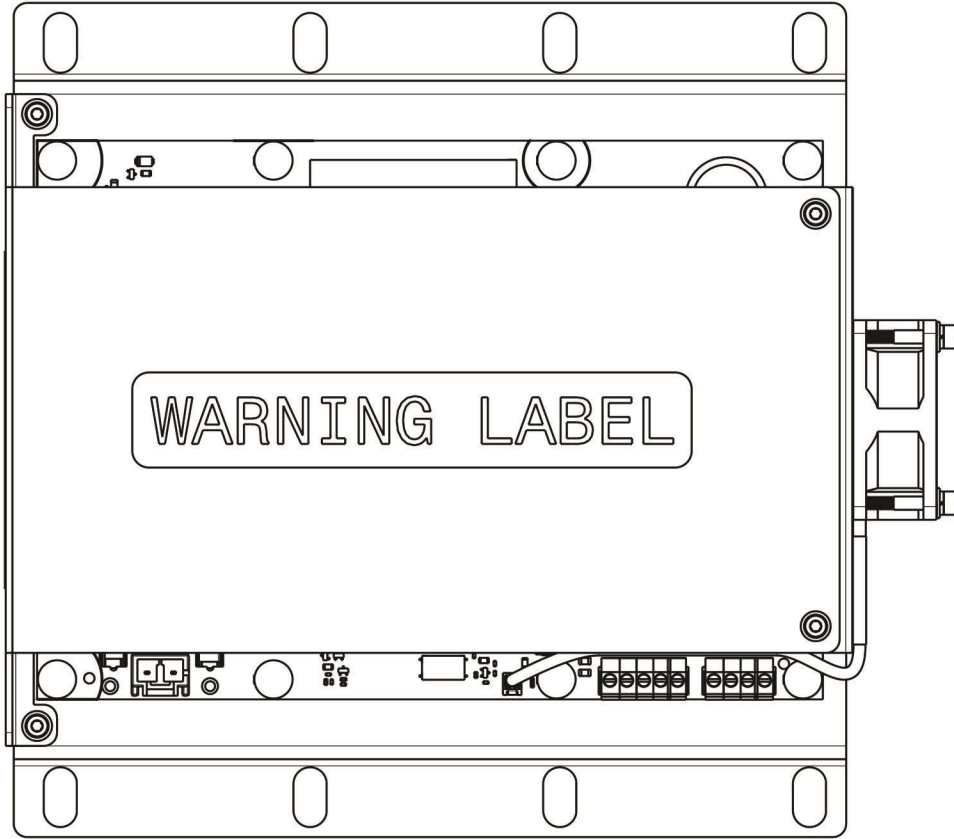


APPLIES TO: VTT1200 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- COMPRESSOR INTERFACE MODULE	110110-1	N/A	CIM only with connection number and "Pin 1" labels

APPLIES TO: VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- COMPRESSOR INTERFACE MODULE	110110-1	N/A	CIM only with connection number and "Pin 1" labels

## 4.2 Module

The HV DC-DC Converter's onboard circuits are powered by the DC bus voltage from the drive. The DC-DC Converter delivers +24V DC (with respect to 0V) to the Compressor Control Module (CCM), and HV+ (+250V DC with respect to HV-) to the PWM Amplifier.



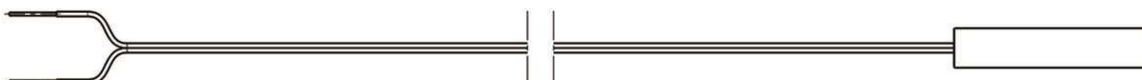
APPLIES TO: VTT1200 & VTX1600 N262			
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- DCDC	110107	N/A	DCDC only with terminal block connectors
KIT- DCDC FAN	110108	N/A	DCDC fan only

### 4.3 Cooling Exit Temperature Sensor

This cooling sensor is to be used on the VT Series compressors. This temperature sensor ensures proper accuracy of the axial position sensor.

#### NOTE

This sensor can only be used with 1.8 and newer firmware.



#### APPLIES TO: VTT1200

DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- PIPE SENSOR - VT SERIES	100283	N/A	Includes sensor, thermal tape, tube clamp, and thermal paste

#### APPLIES TO: VTX1600

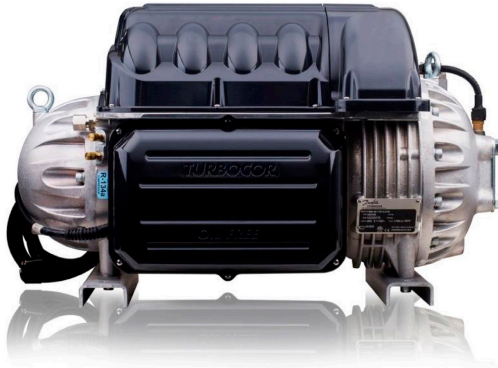
DESCRIPTION	PART NO.	MAJOR REV	COMMENT
KIT- PIPE SENSOR - VT SERIES	100283	N/A	Includes sensor, thermal tape, tube clamp, and thermal paste

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## Chapter 5.0 Recently Obsoleted Kit Reference

OBSOLETE KIT		OBSOLETE KIT APPLICATION	REPLACEMENT KIT	
PART NO.	DESCRIPTION		PART NO.	DESCRIPTION
110050	KIT - O-RING TOUCHDOWN BEARING ASSY	VTT Rev: A, B, C	110094 (VTT) / 112037 (VTX)	KIT - COMPLETE COMPRESSOR O-RING REPLACEMENT
110052	KIT - O-RING BEARING HARNESS & SENSOR	VTT Rev: A, B, C	110094 (VTT) / 112037 (VTX)	KIT - COMPLETE COMPRESSOR O-RING REPLACEMENT
110062	KIT - SERVICE ELECTRONICS	VTT Rev: A & B	110109	KIT - SERVICE ELECTRONICS
110078	KIT - O-RING DISCHARGE	VTT Rev: A, B, C	110120 (VTT Rev A) 110076 (VTT Rev B & C) 112036 (VTX)	O-RING PORTS CONNECTIONS
110082	KIT - SERVICE SIDE COVER	VTT Rev: A	No Replacement	
110084	KIT - POWER COVER	VTT Rev: A	No Replacement	
110091	KIT - O-RING PORTS CONNECTIONS	VTT Rev: A, B, C	110120 (VTT Rev A) 110076 (VTT Rev B & C) 112036 (VTX)	O-RING PORTS CONNECTIONS
110109	KIT - SERVICE ELECTRONICS	VTT, All revisions	110109-1	KIT - SERVICE ELECTRONICS
110110	KIT- COMPRESSOR INTERFACE MODULE	VTT, All revisions	110110-1	KIT- COMPRESSOR INTERFACE MODULE
112049	KIT - MAINS INPUT BRACKET TWO HOLE	VTX Rev: A	112059	KIT - MAINS INPUT BRACKET TWO HOLE (Metal)



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applications  
knowledge

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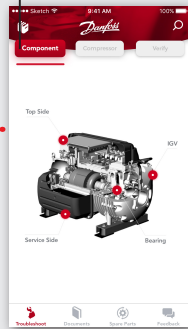
# Quick access to Danfoss TurboCor® compressor troubleshooting.

The new version of the **Danfoss TurboTool® 2.0** app for all your full service Danfoss TurboCor® compressor needs.

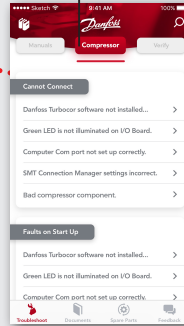
**24/7**  
Access to Danfoss TurboCor® compressor troubleshooting on site

**Troubleshoot**

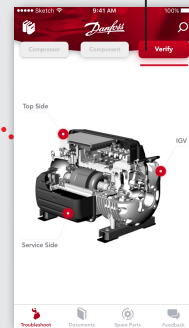
The TurboTool® app makes it easy for technicians to troubleshoot issues on Danfoss TurboCor® compressors.



The user can select from a list of symptoms in the app that match the problems exhibited by the compressor being serviced. The app will then list potential causes, solutions to the problem, and service literature to reference for further information.

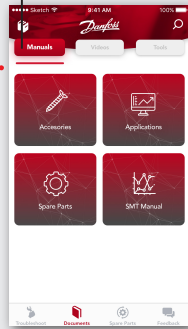


The app provides the correct operating parameters for key components; no need to keep reference documents on hand.

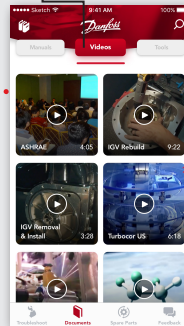


**Documents & Video**

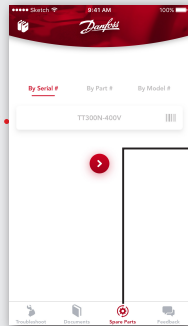
You no longer need to keep hundreds of pages of parts catalogs and training manuals. With the app, all of this information is at your fingertips on your smart device.



With the app, you can access videos made by Danfoss TurboCor® that demonstrate how to remove, install, and rebuild key components on Danfoss TurboCor® compressors.



**Spare Parts**



TurboTool® helps you to quickly identify the required spare parts. A quick scan of the compressor serial # using your smartphone camera or by entering the part # or model #, and the app will display potential spare parts kits.



Download the 2.0 app today!

Scan to download app

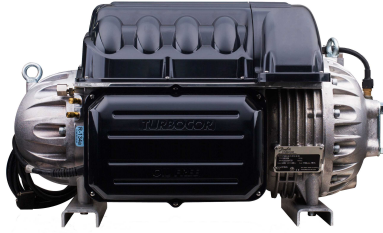


[www.turboCor.danfoss.com](http://www.turboCor.danfoss.com) | **TURBOCOR®**

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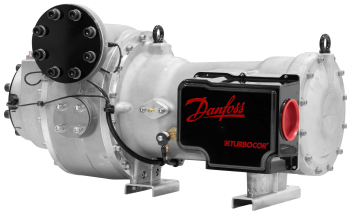
**TTS Compressors**



**Highlift Compressors**



**Danfoss Turboacor Compressors**



**VTX1600 Compressors**



**Highlift Compressors**



**TGS Compressors**

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