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| Revision history | | |
|---|---|---|
| **Rev.** | **Date.** | **Description** |
| 001 | 6/5/2024 | First Issue |
| 002 | 18/7/2025 | Updated as build |
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| **Document Title:** | **BLPH Project - Panel Cabinet Layout: Introduction and Overview** |
| **Document Number:** | K559-2254-CWIWP4202202-E03-001 |
| **Revision:** | Rev002 |
| **Sequence Number:** | 001 |
| **File Name:** | K559-2254-CWIWP4202202-E03-001Rev002 |
| **Purchaser Job:** | K559-2254 |
| **Purchase Order:** | CWIWP4202202 |
| **Code:** | E03 |
| **Requsition Number:** | n/a |
| **Customer:** | CrossWind C.V., Rotterdam, The Netherlands |

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|---|---|
| **Short Title** | Electrical Cabinet Documentation Introduction and Overview |
| **Full Title** | Crosswind/Baseload Power Hub Fuel Cell Package Electrical Cabinet Documentation Introduction and Overview |
| **Abstract** | The purpose of this document is to assist the reader of the E03 series of electrical documentation to understand the context and relation of the individual documents |

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# Revision Record

| Rev # | Description | Revised By | Date |
|---|---|---|---|
| 1 | Initial Release | PBL | June 2024 |
| 2 | Update for "As Built Documentation" | PBL | July 2025 |
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| Checked by: n/a | Date: n/a |
| Approved by: n/a | Date: n/a |

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# 1.0 Purpose and Scope

The purpose of this document is to provide the reader of the E03 series of documents with an overview of the electrical cabinets present in the Fuel Cell Package and the documents providing the documentation for each of them.

# 2.0 Electrical Cabinets

## *2.1 List of Cabinets*

| Designation | Description | Physical Location |
|---|---|---|
| GB01..GB06 | Fuel Cell Modules (FCwave #1..#6) | 40ft Container, one side of the container |
| UC01..UC06 | Fuel Cell DCDC Converter Cabinet | 40ft container, opposite fuel cells |
| UC20 | 40ft Container control Cabinet | 40ft container, middle on DCDC side |
| UC30 | Coolant Skid Control Cabinet | On the coolant skid, middle |
| UC31 | 10ft Container Control Cabinet | 10ft container, behind control panel access hatch |
| UC41 | Coolant Skid VFD Cabinet | On the coolant skid, back-to-back with UC30 |
| UC50 | AC Power Distribution | 40ft container, facing entrance door |

Table 1 - List of Cabinets

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# 3.0 Document contents

The documentation for the cabinets follows a standard template as follows:

### *3.1 Panel Information and Introduction*

The section serves as front page and standard compliance requirements.

- Front Page with cabinet DT and name
- Ballard Standard wire color page
- Ballard Tagging Standard page
- Table of Contents

### *3.2 Controller IO Schematics*

This section is only present if the cabinet contains PLC/Safety PLC racks. The section outlines the construction of the PLC and the cards in the PLC rack(s). For each input/output (DI/DO/AI/AO), the associated control loop is outlined.

### *3.3 Electrical Design Documentation*

This section contains the multiline electrical documentation. Reader is expected to be familiar with electrical drawings.

### *3.4 Terminal Connections*

This section contains terminal block listings and layouts for all terminal blocks.

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## 4.0 Overview of Panel Locations in FC Package

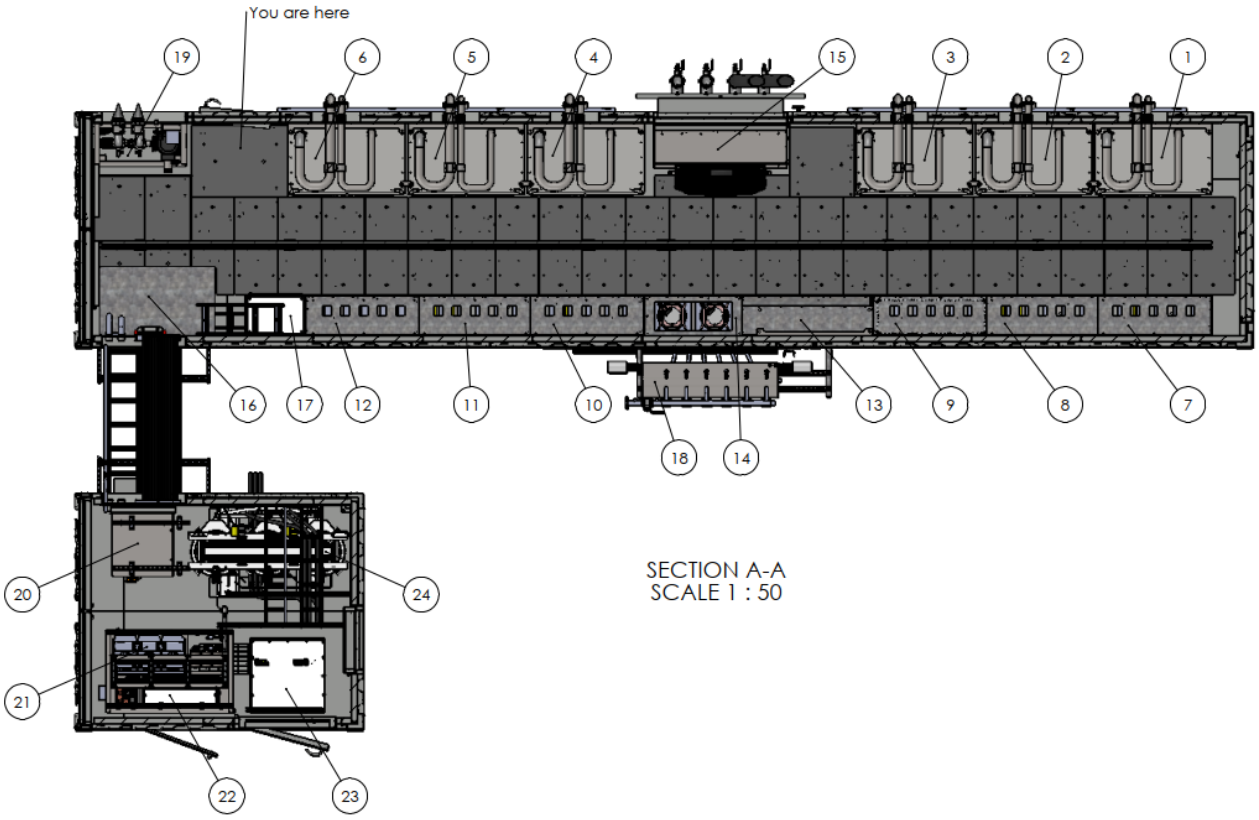
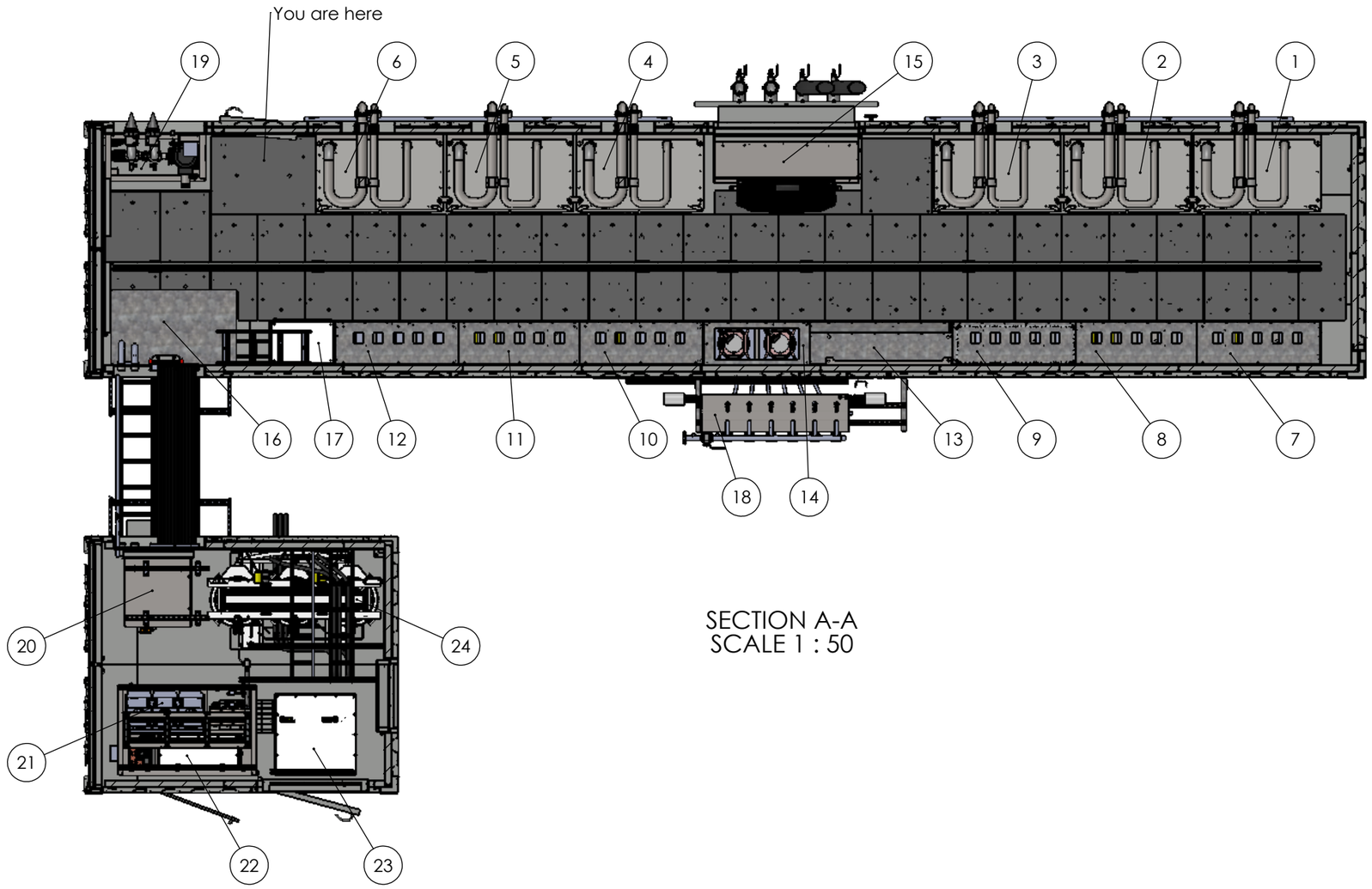



Figure 1 - Panel Locations (see Figure 2 for legend)

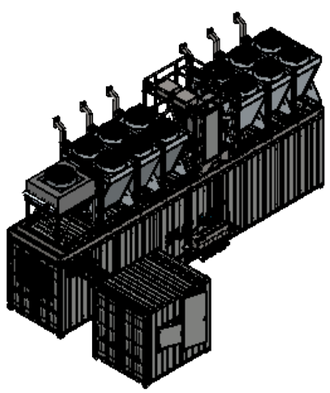
| | | |
|---|---|---|
| 1 | Fuelcell Module 1 | GB01 |
| 2 | Fuelcell Module 2 | GB02 |
| 3 | Fuelcell Module 3 | GB03 |
| 4 | Fuelcell Module 4 | GB04 |
| 5 | Fuelcell Module 5 | GB05 |
| 6 | Fuelcell Module 6 | GB06 |
| 7 | Fuelcell DC/DC Cabinet 1 | UC01 |
| 8 | Fuelcell DC/DC Cabinet 2 | UC02 |
| 9 | Fuelcell DC/DC Cabinet 3 | UC03 |
| 10 | Fuelcell DC/DC Cabinet 4 | UC04 |
| 11 | Fuelcell DC/DC Cabinet 5 | UC05 |
| 12 | Fuelcell DC/DC Cabinet 6 | UC06 |
| 13 | Controle Cabinet | UC20 |
| 14 | Internal Container Ventilation | UC07 |
| 15 | Container Ventilation | |
| 16 | AUX Transformer | TA03 |
| 17 | AUX AC Cabintet | UC50 |
| 18 | H2 Heater | EB01 |
| 19 | LT Pump Rack | GP11 |
| 20 | Container Ventilation | GQ10 |
| 21 | Main DC/AC | TB30 |
| 22 | Controle Cabinet | UC31 |
| 23 | Breaker Cabinet | FC30 |
| 24 | MV Transformer | TA30 |

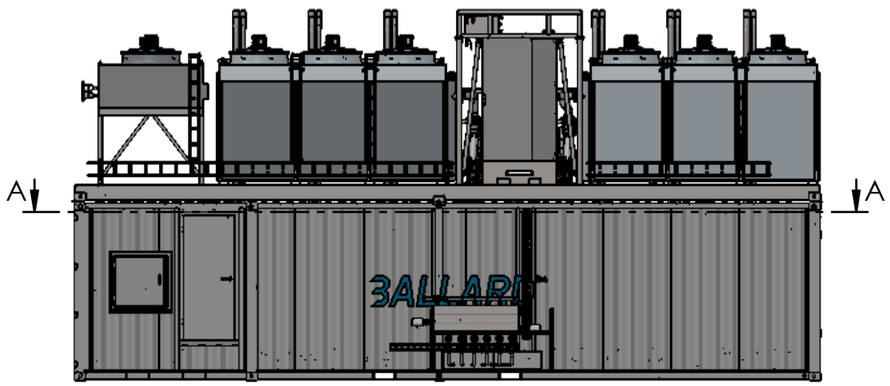
Figure 2 - Legend for Panel Locations

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SECTION A-A
SCALE 1 : 50






| | | |
|---|---|---|
| 1 | Fuelcell Module 1 | GB01 |
| 2 | Fuelcell Module 2 | GB02 |
| 3 | Fuelcell Module 3 | GB03 |
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