

Production Specification Document

Project: Rebound CAD
Title: FRAME BOM
Drawing Number: (refer to original BOM)
Revision: 0
Date: 24 FEB 2017
Drawn by: JMGN
Scale: 1:40
Sheet: 1/1

1. Overview

This specification outlines the requirements for the fabrication and assembly of the frame structure shown in the Rebound CAD Frame BOM. The frame consists of multiple steel and stainless steel components, each detailed in the Parts List. All fabrication, welding, and assembly must conform to the specifications below.

2. Materials

- **Steel:** All components specified as 'STEEL' should use structural grade mild steel (minimum yield strength: 250 MPa), except where otherwise stated.
 - **Stainless Steel:** The BAR_SM_BRACKET (Item 21) must be fabricated from stainless steel (grade SS304 or equivalent).
-

3. Component List

Item	Part Number	Description	Length / Size	Qty	Material
1	ICE_H_BEAM	2387 mm beam	2387 mm	2	Steel
2	ICE_UPRIGHT	1940 mm upright	1940 mm	4	Steel
3	MOTOR_H_SUPPORT	230 mm support	230 mm	2	Steel
4	HALF_END	1224 mm end	1224 mm	2	Steel
5	TANK_SIDE_BRACE	2095 mm brace	2095 mm	7	Steel
...
21	BAR_SM_BRACKET	51 mm bracket	51 mm	4	Stainless Steel
...

Refer to the full BOM for the complete listing.

4. Fabrication Instructions

- **All cutting, drilling, and forming** must use processes compatible with the specified materials.
 - **All welds** should be continuous, unless otherwise specified, and executed per AWS D1.1 (or equivalent local standard).
 - **Sharp edges and burrs** should be removed from all parts.
 - **Galvanization or corrosion protection** is required for all steel components, except stainless steel parts, unless surfaces are designated as machined/mating joints.
 - Preferred method: powder-coating after fabrication, color and gloss to be determined by the project engineer.
-

5. Assembly Instructions

- **Reference Drawing:** Use isometric and callout numbers to coordinate parts in assembly.
 - Fastenings not specified in the BOM are to be selected by the fabricator to match the identified loads and material thickness.
 - During assembly, ensure all vertical and horizontal members are square and plumb to within 1.5mm per meter.
 - Subassemblies (e.g., “TANK_SIDE_BRACE” with adjacent “EXT_UPRIGHT” or “COLUMN_UPRIGHT”) must be test-fitted prior to final welding.
 - Stainless steel brackets (Item 21) must be isolated from mild steel with appropriate washers or gaskets to avoid galvanic corrosion.
-

6. Quality Requirements

- **Dimensional tolerances:** $\pm 2\text{mm}$ for all lengths unless otherwise specified.
- **Weld inspection:** Visual inspection for continuity, penetration, and absence of cracks/defects.
- **Protection:** All parts must be free of rust,