

DESIGN SPECIFICATION:

1. Steel components designed to meet CSA-S136.

2. Rack structures have been designed for structuran adequacy in accordance with the general requirements of Part 4 of the National Building Code (2005) and the specific requirements of the user guide for steel storage racks / standard for the design and construction of steel store racks (CSA A344.1-05 /A344.2-05) as applicable.

3. Allowance had been made for local seismic loading.

4. Maximum beam deflection not to exceed L/180, where 'L' represents the length of beam in inches.

MATERIAL SPECIFICATIONS AND SAFETY FACTORS (PALLET RACK):

1. Cold formed frame and beam sections are 'UNI-RAK' style are constructed from high strength steel conforming to CSA G40.20-04/ G40.21-04, Grade 50W min.

- 2. Miscellaneous Structural sections, plates etc. Conforming to CSA G40.20-04/G40.21-04, GRADE 44W.
- 3. Frames have been designed with a safety factor of at least 1.75 against buckling.
- 4. Beams have been designed with a safety factor of 1.65 agains yielding.

Note: The safety factors given are required by code and are not, under any circumstances, to be eroded or diminished in any way.

WELDING:

1. Welding to be according to CSA W59 latest edition.

FIRE RATING:

1. No allowance has been made for fire rating. In-rack sprinklers, if required, are the responsibility of the owner.

2. All other concerns in a non-structural nature including lighting, fire extinguishers, 'No Smoking' signs etc., shall be the responsibility of the owner and conform to the applicable fire and building codes.

SLAB-ON-GRADE (S.O.G):

1. The owner is responsible to ensure the Conc. S.O.G. and subgrade soil conditions are adequate to sustain rack loads. The owner is required to take any action necessary to ensure adequacy, including geotechnical investigations and analysis by a structural engineer, if required.

OWNER MAINTENANCE:

1. The owner shall maintain the structural integrity of the installed rack system by assuring proper operational, housekeeping, and maintenance procedures including, but not limited to, the following:

a) Prohibit overloading of any beam level and of the overall rack system.

b) Regularly inspect for damage. If damage is found, immediately unload the affected area and replace or repair any damaged posts, beams or other structural components.

- c) Require all pallets to be maintained in good, safe operating condition.
- d) Ensure pallets are placed onto load beams in a properly stacked and stable position.

e) Pallets must span both means. Do not place undersized pallets directly on wire mesh decks or safety bars unless said components are specifically designed for such loading.

f) Customer to ensure storage at the groung level does not prohibit access to any exits or main aisles as required by applicable fire and building codes.

- g) All material handling equipment operators should be trained in accordance with CSA B355
- h) Material handling practices should be designed to minimize impact loads on the pallet rack.

ALTERATIONS:

1. Rack frame allowable load capacity is based on beam locations and pallet loading as shown. Reconfiguration of beam levels or rearrangement of the rack structure is not permitted without prior review and approval from Space Aid MFG.

PERMITS:

1. All permits requires shall be the responsibility of the owner.

PLAQUES:

1. The owner is recommended to display appropriate signage indicating maximum permissible loads in a prominent viewing position.

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