

Colby RACKMAN, Version 3.1

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Structural Design - Regular Adjustable Pallet Rack

Monday, 26 May 2008, 5:06 PM

RACKMAN Design File : Colby_RACKMAN_v3.1_defaults.rmd

RACKMAN Results File : Colby_RACKMAN_v3.1_defaults.rmr

Project Name : Sample Project

Reference No. : RB21522

Rack Designer : Jim Murphy

Rack Company : Colby Central

Rack Label : R1

Number of bays : 8
Beam clear entry : 2590 mm
Beam deflection limit : Span/180
Sway deflection limit (X) : Height/200
Sway deflection limit (Z) : Height/200
Frame height : 5475 mm
Frame depth : 840 mm
RL first horizontal brace : 300 mm
Frame bracing style : K-braced
Frame configuration : Double-sided, spaced by 380 mm
Baseplate type : External
Upright profile : RF9019/G450

Bay Load : 6000 kg

*** Structural design is ACCEPTABLE, with 2.7 percent reserve. ***

Level	RL	Pallets per Compartment	Pallet Load	Compartment Load	Beam Profile	Beam Deflection
1	1800 mm	2	1000 kg	2000 kg	BB9316/AB3825	13.4 mm
2	3600 mm	2	1000 kg	2000 kg	BB9316/AB3825	13.3 mm
3	5400 mm	2	1000 kg	2000 kg	BB9316/AB3825	14.0 mm

Normalised Design Ratios (<= 1.0 is Acceptable):

Level	Beam Strength	Beam Deflection	Uprights Cross-Aisle	Uprights Down-Aisle	Connectors Down-Aisle	Sway Cross-Aisle	Sway Down-Aisle
1	0.858	0.934	0.640	0.668	0.613	-	-
2	0.854	0.926	0.405	0.552	0.590	-	-
3	0.883	0.973	0.266	0.327	0.569	0.069	0.282

Elastic critical load factor (down-aisle) = 2.05

Elastic critical load factor (cross-aisle) = 3.98