RIDG-U-RAK®
STORAGE SYSTEMS

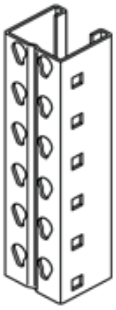
Teardrop
PALLET RACK

REV 4 - February, 2024

UPRIGHT FRAME CAPACITIES


Style 31I


Style 32I


Style 33I


Style 43I

Static Load Frame Capacities

Unsupported Length (Vertical Beam Spacing)	31I 3 x 1-5/8	32I 3 x 2-1/4	33I 3 X 3					43I 4 x 3	
	UF-S31I	UF-S32I	UF-S33I	UF-R33I	UF-M33I	UF-Y33I	UF-H33I	UF-M43I	UF-H43I
36"	19,100	23,500	28,600	34,100	38,800	42,100	47,000	47,900	62,600
42"	17,900	22,100	26,900	33,100	35,600	39,500	43,000	45,700	60,500
48"	16,700	20,600	25,100	29,800	33,800	36,600	40,900	44,500	58,100
54"	15,200	18,900	23,100	27,500	31,900	33,600	38,600	43,100	55,300
60"	13,800	17,200	21,100	25,000	28,100	30,400	33,900	40,200	52,400
72"	10,800	13,700	17,000	20,000	22,300	24,100	26,800	35,300	46,000
84"	8,200	10,600	13,200	15,400	17,200	18,600	20,700	30,200	39,300
96"	6,500	8,400	10,500	12,200	13,500	14,700	16,300	25,200	32,800
108"	5,200	6,800	8,500	9,900	10,900	11,800	13,100	20,500	26,600

- The capacities shown in this table are for static load conditions only.
- The Frame Capacity Chart gives static load capacities based on the specified "Unsupported Length" of the columns (Vertical Beam Spacing).

WARNING: Due to the system-based design approach of the current RMI Specification, the use of static load capacities are no longer appropriate. Load ratings can only be provided through a system analysis which accounts for configuration of the system, static loading, seismic parameters, stability requirements and the interaction characteristics of the various system components. These capacity tables should only be used as a "starting point."

Beam Capacities

Beam Profile	Beam Lengths										
	48"	60"	72"	84"	92"	96"	102"	108"	120"	144"	156"
250 S	5,700	4,530	3,130	2,300	1,910	1,750	1,550	1,380	1,120	770	660
300 S	7,500	5,980	4,820	3,530	2,940	2,690	2,380	2,120	1,720	1,190	1,010
355 S	9,760	7,770	6,460	5,330	4,440	4,070	3,600	3,210	2,590	1,790	1,520
410 L	10,810	8,620	7,150	6,110	5,570	5,200	4,600	4,100	3,310	2,290	1,940
410 S	12,000	9,780	8,120	6,930	6,320	5,830	5,160	4,600	3,710	2,570	2,180
465 S	12,000	11,970	9,940	8,490	7,740	7,410	6,960	6,320	5,110	3,530	3,000
500 S	12,000	12,000	11,170	9,540	8,700	8,330	7,830	7,380	6,140	4,250	3,610
550 S	18,000	18,000	18,000	11,150	10,160	9,720	9,140	8,620	7,740	5,420	4,610
600 S	18,000	18,000	18,000	12,850	11,710	11,210	10,540	9,940	8,920	6,790	5,770
650 S	18,000	18,000	18,000	14,660	13,360	12,790	12,020	11,340	10,180	8,360	7,110
650 R	18,000	18,000	18,000	18,000	15,160	14,520	13,640	12,870	11,550	9,370	7,970

- Capacities are based on uniformly distributed loads per pair of beams.
- Capacities listed are for non-seismic conditions. For seismic conditions consult with Ridg-U-Rak sales or engineering.
- Capacities listed are for a 2-pallet wide condition.
- All beams over 114" in length should utilize at least (1) flanged, tek-screwed or lock-in cross bar located at mid length.
- Maximum shelf load for Teardrop Beams using 6" connectors with 2-pins is 12,000# per pair.
- Maximum shelf load for Teardrop Beams using 8" connectors with 3-pins is 18,000# per pair.

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New RMI Frame Capacity Guidelines

Understanding Frame Capacity Tables & The RMI Specification (ANSI MH16.1-2021)

The RMI specification criteria for selective rack structures has changed how frames are designed. The use of traditional frame capacity tables are no longer valid.

The capacity of frames are dependent on a variety of factors.
Here are some points that may help better understand the factors that influence frame capacity.

- The beam-to-column connections used are very important
- The ratio of average to maximum loads is very important
- Column Base Plates
- Anchors used
- Number of Storage Levels
- Beam Level spacing
- Beam Sizes
- Column Profile and its section properties
- Seismic design criteria for geographic location
- Height-to-depth ratio of the frame
- System Importance Factor – based on the environment of storage (Retail or Industrial)

Hence, the use of traditional frame tables are no longer valid, and they should only be used as a “starting point”.

Existing frame systems designed to older specifications are “grandfathered” and do not need to be recalculated to the current specification requirements, unless the rack is reconfigured or relocated. In those cases, however, the use of average-to-maximum load ratios and stronger beam connections (particularly in lower beam levels of the system) can many times help to achieve the desired load ratings of existing frames. An experienced rack engineer, familiar with the current RMI design criteria, can assist in determining what changes are needed to achieve the desired load ratings for a rack system designed to older specifications.

Storage Rack: Cold-Formed Steel ANSI MH16.1-2023 — Rack Manufacturers Institute — 5150

CERTIFIED MANUFACTURER | CERTIFIED SYSTEM | CERTIFIED INSTALLATION

RMI R-Mark Certifications

RIDG-U-RAK has been awarded R-Mark Manufacturer, Systems and Installation certifications. RMI, the Rack Manufacturer's Institute, updated its requirements adding critical design and manufacture responsibilities.

RIDG-U-RAK is a founding and executive level member of the RMI, Rack Manufacturer's Institute.