



ISOMETRIC VIEW - QUICKFRAME ADJUSTABLE FRAME

Main/Cross Rail Limitations:

- A) Cross Rail end reaction shall not exceed 1000 lbs (1 Kip) for a single angle connection or 2000 lbs (2 Kip) for the optional double angle connection. Installation contractor to verify loading distribution diagram of supported equipment and place equipment so the allowable loads are not exceeded.
- B) Main Rail end reaction shall not exceed 1750 lbs (1.75 Kip). Installation contractor to verify the loading distribution diagram of supported equipment and place equipment so the allowable loads are not exceeded.
- C) Maximum Gap between Main Rail and supporting roof framing shall be 1/4". Main Rail may be installed snug to supporting roof framing.
- D) For Frame Span and Cross Rail opening dimensions with corresponding minimum overlaps, See Dimension Table.

QuickFrame Material Specifications:

- 1. All Main/Cross Rails shall be a minimum 12 GAGE cold formed material and shall conform to ASTM A653 CS TYPE B.
- 2. All Angle Connections shall be a minimum 12 GAGE cold formed material and shall conform to ASTM A653 CS TYPE B Grade 45 KSI.
- 3. All End Connections shall be a minimum 3/16" material and shall conform to ASTM A36 Steel.
- 4. All bolts shall be 1/2" diameter x 1" long SAE Grade 5 or SAE Grade 8.2 carriage bolts with nuts.
 - 4a. Angle connections shall contain 2 bolts in each leg. At optional double angle connection, bolts in cross rail may be shared.
 - 4b. End connections shall contain 2 bolts in main rail.
 - 4c. Main/Cross Rail splice connection shall contain 1 bolt (minimum) at each end of splice.

Main Rail Dimensions				Cross Rail Dimensions		
Frame Span		Individual Rail Size (in.)	Min. Overlap (in.)	Opening Span (in.)	Individual Rail Size (in.)	Min. Overlap (in.)
Length (ft.)	Length (in.)					
4'-0"	48"	35"	22"	15"-20"	15"	10"
5'-0"	60"	45"	30"	20"-30"	20"	10"
6'-0"	72"	60"	48"	30"-45"	30"	15"
7'-0"	84"	60"	36"	35"-50"	35"	20"
8'-0" (A)	96"	60"	24"	45"-72"	45"	18"
8'-0" (B)	96"	75"	54"			
9'-0"	108"	75"	42"			
10'-0"	120"	75"	30"			

ENGINEERING SUMMARY SHEET

QuickFrames Load Table Schedule

Span (ft)*	Maximum Frame Load (pounds)*					
	4'-0" between main rails		6'-0" between main rails		8'-0" between main rails	
	(1)	(2)	(1)	(2)	(1)	(2)
	One Angle Connector		One Angle Connector		One Angle Connector	
4'-0"	3600	2250	3400	2125	3200	2000
5'-0"	3480	2175	3220	2013	2960	1850
6'-0"	3360	2100	3040	1900	2720	1700
7'-0"	3240	2025	2860	1788	2480	1550
8'-0"(24")	2460	1538	2200	1375	1940	1213
8'-0"(54")	3120	1950	2680	1675	2240	1400
9'-0"	2620	1638	2330	1456	2000	1250
10'-0"	1720	1075	1400	875	1080	675
	Two Angle Connector		Two Angle Connector		Two Angle Connector	
4'-0"	6720	4200	6580	4113	6440	4025
5'-0"	6580	4113	6410	4006	6240	3900
6'-0"	6600	4125	6400	4000	6200	3875
7'-0"	3960	2475	3730	2331	3500	2188
8'-0"(24")	2460	1538	2200	1375	1940	1213
8'-0"(54")	4480	2800	4220	2638	3960	2475
9'-0"	2620	1638	2330	1456	2040	1275
10'-0"	1720	1075	1400	875	1080	675

(1) The maximum load the frame can carry when all weight is placed evenly on the main rails and cross rails and distributed evenly between all four support ends.
 (2) Per IBC Section 1607.8.2, at frames supporting light machinery (shaft or motor driven), the Maximum Frame Loads shown have been reduced by 20%. Also, an industry standard unbalanced mechanical loading of 2/3 and 1/3 is included.
 * For Main Rail dimensions and overlap requirements, see Main Rail Dimension Table. Refer to all notes on this sheet for cross rail and end connection limitations.

Design Criteria:

- Building / Design Codes: 2009/2006/2003 International Building Code (IBC) / ASCE / SEI 7-05 / AISI 2007 North American Specification (NAS)
- Wind Load (Maximum): 90 MPH, Exposure C
- Seismic Load (Maximum): Seismic Design Category B / S_{DS} < 0.33; S_{D1} < 0.133
- Snow Load (Maximum): 20 PSF Flat Roof Load (See Note 3)
- Dead / Live Load (Maximum): 10 PSF / 20 PSF (See Note 5)

Notes:

- 1) Maximum Frame Loads shown in the table are based on the above maximum design loads. Contact Quickframes if above loads are exceeded.
- 2) Maximum Loads shown for all spans and material strengths do not exceed a L/240 deflection ratio.
- 3) Snow Drift loads are not included in design. All sides of the roof projections supported by the frame shall be less than 15 feet long per ASCE 7-05 Section 7.8.
- 4) Dead/Live Loads are roof structure dead and live loads bearing on frame.
- 5) Quickframe installation shall conform to the Quickframe installation instructions.

Note:

MAXIMUM LOADS SHOWN ARE FOR THE QUICKFRAME ADJUSTABLE FRAME ONLY. BUILDING ROOF STRUCTURE FRAMING CAPACITY (EXISTING OR NEW) SHALL BE CHECKED BY A REGISTERED STRUCTURAL ENGINEER TO ENSURE THE PROPOSED LOAD ON THE FRAME DOES NOT OVERSTRESS ANY ROOF SUPPORTING FRAMING MEMBERS AND/OR BUILDING COMPONENTS.

Project Information:

• Roof Structure Type:	XXX
• Roof Material:	XXX
• QuickFrame Span:	XXX
• Material Strength:	XXX
• Equipment Type:	XXX
• Equipment Weight:	XXX

SEAL:



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12 GAUGE FRAME WITH 3/16"
END CONNECTOR WITH 3/16"
ANGLE AT SET BOLTS.

THIS SHEET IS INTENDED FOR GENERAL USE ONLY AND IS NOT CONSIDERED SITE SPECIFIC UNLESS ADDRESS OF SITE IS SHOWN IN TITLE BLOCK AND THE STRUCTURAL ENGINEER OF RECORDS SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

QUICKFRAMES

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JOB NUMBER: 13-120-XXX

DRAWN: TMH	ENGINEER: DEE	CHECKED: SJH
RAIL/CONNECTORS: 12.GA		SCALE: N.T.S.
DATE: XX/XX/2013		SHEET: S1