

A325/A490 CONNECTION REPORT

AISC 360-22 §J3 (Bolt Shear/Bearing) · §J2 (Welds E70XX) · §B3.1 (LRFD)

US Warehouse Portal Frame

Bolt Design Summary

Grade	Diameter	Fnt (ksi)	Ab (in ²)	ϕR_{nt} (kips)	ϕR_{nv} (kips)	Code
A325-N	3/4"	90	0.4418	29.8	17.9	AISC 360-22 §J3.6
A325-N	7/8"	90	0.6013	40.6	24.4	AISC 360-22 §J3.6
A325-N	1"	90	0.7854	53.1	31.9	AISC 360-22 §J3.6
A490-N	7/8"	113	0.6013	51.1	30.7	AISC 360-22 §J3.6
A490-N	1"	113	0.7854	66.8	40.1	AISC 360-22 §J3.6
A490-N	1-1/8"	113	0.9940	84.5	50.8	AISC 360-22 §J3.6

E70XX Fillet Weld Capacity

Weld Size (in)	Throat (in)	$\phi R_{n/in}$ (k/in) 0°	$\phi R_{n/in}$ (k/in) 90°	Code
3/16"	0.1326	5.57	8.35	AISC 360-22 §J2.4
1/4"	0.1768	7.42	11.13	AISC 360-22 §J2.4
5/16"	0.2209	9.28	13.92	AISC 360-22 §J2.4
3/8"	0.2651	11.13	16.70	AISC 360-22 §J2.4
1/2"	0.3536	14.84	22.26	AISC 360-22 §J2.4

Connection Verification — US Warehouse Portal Frame

J1: 4-bolt extended unstiffened endplate

Bolt: A325-N 7/8" | Weld: E70XX

Utilisation: 84% (OK — PASSES AISC 360-22 §B3.1 LRFD)