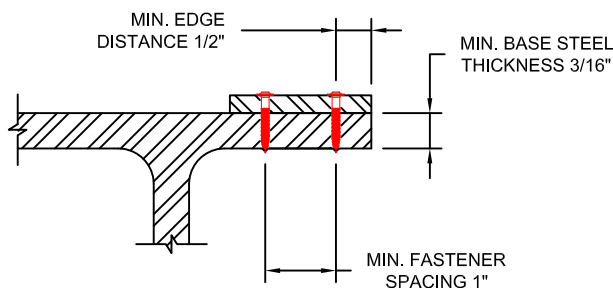


Hilti X-U Powder Driven Fastener General Notes

(Guidelines per ICC-ES ESR-2269 and 2013 Hilti Product Technical Guide)

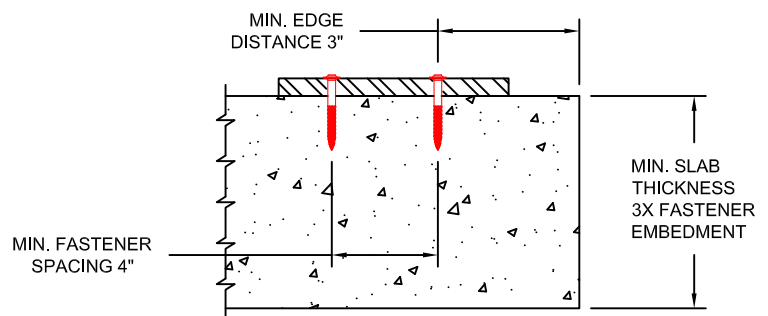
General Notes for Fasteners in Steel

1. Fasteners must be driven to minimum embedment depth specified in table.
2. All X-U and X-U 15 fasteners shall be installed according to manufacturer's installation instructions.
3. Contractor must check base steel material being fastened to and select appropriate fastener for the application.
4. Contact Hilti Technical Support (1-877-749-6337) for assistance.



General Notes for Fasteners in Concrete

1. Fasteners must be driven to minimum embedment depth specified in table.
2. All X-U fasteners shall be installed according to manufacturer's installation instructions.
3. Contractor must check concrete being fastened to and select appropriate fastener for the application.
4. Contact Hilti Technical Support (1-877-749-6337) for assistance.



Hilti Power Driven Fasteners Installed in Steel (lb)^{1,2,4,5}

Hilti Fastener Nomenclature	Shank Diameter (in.)	Embedment		Allowable Load Type	Steel Plate Thickness (in.) ³				
		Steel Thick. (in.)	Min. Embed. (in.)		3/16	1/4	3/8	1/2	≥3/4
X-U	0.157	1/8-3/8	pt. pen.	Tension	535	775	935	900	350
		1/2	pt. pen.	Shear	720	720	720	720	375
		≥3/4	1/2						
X-U 15	0.145	1/8-3/8	pt. pen.	Tension	155	230	420	365	365
		1/2	15/32	Shear	395	395	450	500	400
		>3/4	15/32						

Hilti Power Driven Fasteners Installed in Normal Weight Concrete (lb)^{1,2,5,6}

Hilti Fastener Nomenclature	Shank Diameter (in.)	Minimum Embedment (in.)	Allowable Load Type	Compressive Strength ^{3,4}		
				2000 psi	4000 psi	6000 psi
X-U	0.157	3/4	Tension	100	100	105
			Shear	125	225	280
		1	Tension	165	170	110
			Shear	190	225	280
		1-1/4	Tension	240	280	180
			Shear	310	310	425
		1-1/2	Tension	275	325	-
			Shear	420	420	-

Notes:

1. All recommended allowable loads and data from currently available ICC-ES ESR-2269 or 2013 Hilti Product Technical Guide.
2. Allowable loads computed using ICC-ES AC70 equation 3-1 (variable safety factor).
3. Substrate is steel plate meeting minimum material properties of ASTM A36.
4. Minimum fastener spacing is 1 inch; minimum fastener edge distance is 1/2-inch; minimum base material steel thickness is 3/16-inch.
5. Contact Hilti Technical Support at 1-877-749-6337 for technical assistance.

Notes

1. All recommended allowable loads and data from currently available ICC-ES ESR-2269 or 2013 Hilti Product Technical Guide.
2. Allowable loads computed using ICC-ES AC70 equation 3-1 (variable safety factor).
3. Substrate is normal weight concrete with stone aggregate designed in accordance with ASTM C33.
4. Compressive strengths are at time of fastener installation.
5. Minimum fastener spacing is 4 inches; minimum fastener edge distance is 3 inches; minimum base material concrete thickness is 3 times fastener embedment.
6. Contact Hilti Technical Support at 1-877-749-6337 for technical assistance.