

PK-USA PKI Series I-joists

Localized Bottom Flange Load Capacity

Connection allowance

During building construction instances arise in which items are suspended from the bottom flange of a PKI Series I-joist. Such items would include ductwork, hoods, vents, lighting, furnaces, garage door motors, bikes, etc. When such items are suspended from the bottom flange only, the type of connect, quantity of connectors and load limitations must be accounted for.

Maximum allowable concentrated load

The maximum allowable concentrated load attached only to the bottom flange of a PKI Series I-joist is limited to 250 lbs. every 6-inches. When loads are un-balanced or when connection is only to a single side of the bottom flange, then the allowable load is reduced by 50%.

Fastener limitations

Limitations to fastener capacity, location, spacing, end/edge distances and pre-drill requirements are outlined in the 2024 NDS® guidelines.

Pkjoist® Specifications

Joist Series	Flange Thickness (in)	Flange Width (in)	Specific Gravity (min)
PKI 10	1.5	2.5	0.42
PKI 15	2.5	1.5	0.42
PKI 20	1.5	2.5	0.42
PKI 23	1.5	2.5	0.46
PKI 35Plus	1.5	3.5	0.42
PKI 40	1.5	3.5	0.46
PKI 50	1.5	3.5	0.50

Wood Screw Withdrawal Capacity

Fastener (Wood Screw)	Dia. (inches)	Max Pre-Drill (inches)	W ^(max) [lbs/ea]		
			PKI 10, 15, 20, 35Plus	PKI 23, 40	PKI 50
No. 7	5/32"	3/32"	114	136	160
No. 8	5/32"	3/32"	123	148	175
No. 9	11/64"	7/64"	133	160	189
No. 10	3/16"	7/64"	142	171	202
No. 12	7/32"	1/8"	162	195	231
No. 14	1/4"	9/64"	181	219	258
Hex Head Lag	1/4"	1/8"	259	298	337

- Note: 1. Withdrawal capacity for lag screws from 2024 NDS® Table 12.2A based on full fastener penetration through the bottom flange excluding fastener tip.
2. Withdrawal capacity for wood screws from 2024 NDS® Table 12.2B based on full fastener penetration through the bottom flange excluding fastener tip.

If you have any questions, please contact PK-USA for details.

