

MAXIMUM AVAILABLE BEARING LENGTH AVAILABLE FOR STANDARD, BRICK LEDGE AND TAPER TOP



TECHNICAL BULLETIN No. 51

Purpose

This bulletin provides guidance on maximum bearing length available for ICF wall assemblies supported by special configurations (larger standard, brick ledge, and taper top). It is intended for engineers, contractors, and inspectors to ensure compliance with structural requirements and installation best practices.

Bearing Length Guidelines

- ICF Block Above: Size and type of element above bearing condition.
- ICF Block Below: Size and type of element below bearing condition.
- Bearing Length: Maximum available seat length for load transfer.

Brick Ledge Function & Design

Brick Ledge blocks create a load-bearing surface to support floor systems, including top and bottom chord bearing trusses or joists. Brick Ledge block units are also used to support a brick veneer as the exterior finish material.

With standard reinforcing, Brick Ledge can bear up to 1300 lb/ft (19 kN/m) of wall. With site-specific engineering, up to 3000 lb/ft (44 kN/m) of wall is attainable.

In the table below, the top number is the concrete bearing length with no foam removed, and the bottom number is with foam removed from the block above.

Chart of Bearing Lengths

Imperial

		ICF Block Below													
		4" Standard	6" Standard	8" Standard	10" Standard	12" Standard	4" Brick Ledge	6" Brick Ledge	8" Brick Ledge	10" Brick Ledge	12" Brick Ledge	Taper Top (Single)	Taper Top (Double)		
ICF Block Above (Standard)	4"	0	0	1.25	3.25	5.25	3.875	5.875	7.875	9.975	11.875	5.75	7.5	No	
		0	2	4	6	8	6.625	8.625	10.625	12.625	14.625	...	...	Yes
	6"	...	0	0	1.25	3.25	...	3.875	5.875	7.875	9.975	7.75	9.5	No	
		...	0	2	4	6	...	6.625	8.625	10.625	12.625	...	...	Yes
	8"	...	...	0	0	1.25	...	...	3.875	5.875	7.875	9.75	11.5	No
		...	...	0	2	4	...	...	6.625	8.625	10.625	...	...	Yes
	10"	0	0	3.875	5.875	11.75	13.5	No	
		0	2	6.625	8.625	Yes	
	12"	0	13.75	15.5	No	
		0	Yes	

Foam removed

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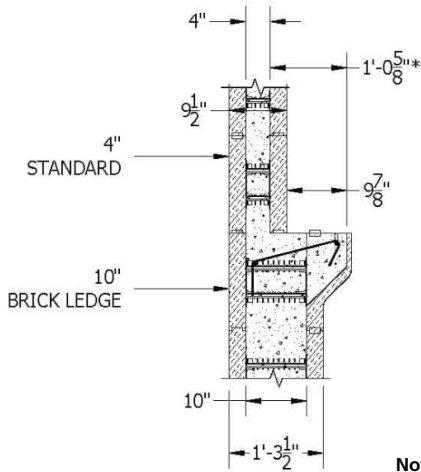
Metric

		ICF Block Below													
		102 mm Standard	152 mm Standard	203 mm Standard	254 mm Standard	305 mm Standard	102 mm Brick Ledge	152 mm Brick Ledge	203 mm Brick Ledge	254 mm Brick Ledge	305 mm Brick Ledge	Taper Top (Single)	Taper Top (Double)		
ICF Block Above (Standard)	102 mm	0	0	32	82	133	98	149	200	253	302	146	191	No	Foam removed
		0	51	102	152	203	168	219	270	321	371	...	...	Yes
	152 mm	...	0	0	32	82	...	98	149	200	253	197	241	No	
		...	0	51	102	152	...	168	219	270	321	...	...	Yes
	203 mm	...	...	0	0	32	...	...	98	149	200	248	292	No
		...	...	0	51	102	...	...	168	219	270	...	...	Yes
	254 mm	...	...	...	0	0	...	...	...	98	149	298	343	No
		...	...	...	0	51	...	...	...	168	219	...	...	Yes
	305 mm	...	...	...	...	0	...	...	...	...	...	349	394	No
		...	...	...	...	0	...	...	...	...	...	...	...	Yes

Note: 1 inch = 25.4 mm

Special Conditions for ICF Assemblies

- ICF Element Above: Standard.
- ICF Element Below: Can be Standard, Brick Ledge, Single Taper Top or Double Taper Top.
- Example: For a Standard 4" element above and Brick Ledge 10" below with foam removed, available bearing length = 12.625 in.



Notes: Remove foam to achieve bearing length.

Notes

1. All values are minimum requirements and must be verified against project-specific structural design.
2. Bearing surfaces must be clean, level, and provide full support for precast members.
3. Where additional load or seismic considerations apply, consult with the structural engineer of record.