InSoFast®

Engineered Products for Shipping Containers

Space Saving

Simple

Healthy Living

CX-44 Panels

LowPro System

We've got you covered!

InSoFast Inserts

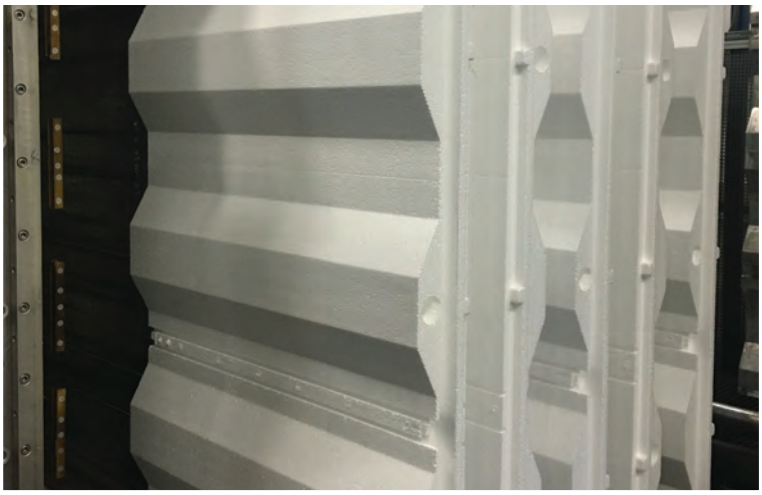
InSoFast on the Floor

One Step: Framing & Insulation

InSoFast takes the complex wall assembly of a shipping container and makes it simple.

Healthy Indoor Air Quality

InSoFast panels are fused with steam. There is no chemical off-gassing which is important in an air tight container.



Space Saving & High Performance

The thin profile of the InSoFast panel outperforms a conventional 2x4 framed wall and takes up 40% less space.

Eliminate Condensation

The closed cell foam sealed to the container can prevent condensation on the interior of the conditioned space.

A Complete Thermal Break

The fully insulated studs provide a complete thermal break increasing the performance of the wall assembly by up to 50%.

Production Advantages

InSoFast panels are engineered to be simple and complete. Any crew can quickly frame and insulate a shipping container.

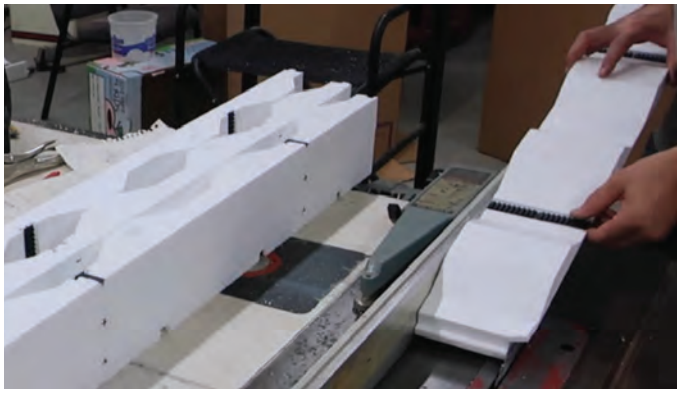
Stick . . . Stack . . . DONE!

- ✔ Closed cell foam insulation
- ✔ Integrated wall framing
- ✔ Engineered adhesive application
- ✔ Integrated electrical raceways
- ✔ Complete thermal break
- ✔ Easy installation

- ✖ No holes
- ✖ No welding
- ✖ No spray foam
- ✖ No off-gassing
- ✖ No condensation
- ✔ No problems

Why work so HARD?

Cutting InSoFast panels is easy



Apply Adhesive to the InSoFast Studs

Run Wiring through Raceways

Ready for Drywall or most any Finish!

www.insofast.com
(888) 501-7899

Nationwide Code Compliance: DrJ Engineering TER # 1910-03

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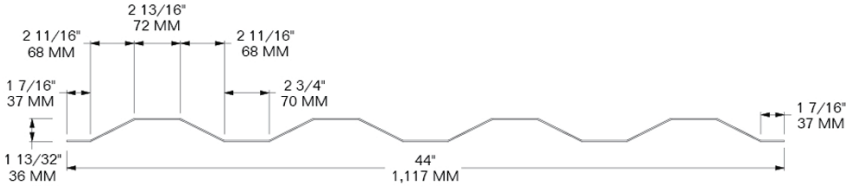
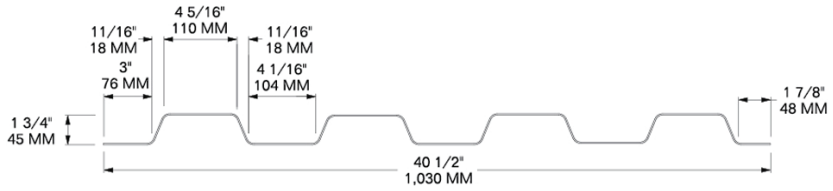
InSoFast®

Insert Dimensions for Containers

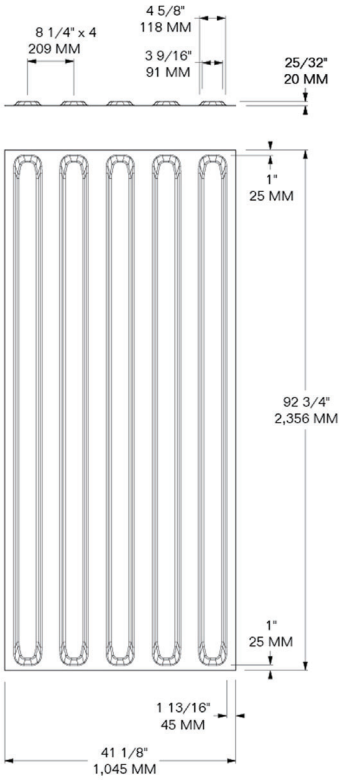
Side Wall Inserts



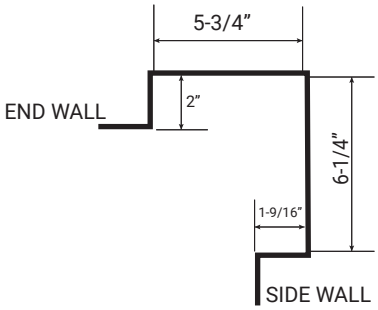
End Wall Inserts



Ceiling Inserts



End Wall Corner Post Inserts



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Shipping Container R-Value Comparison

InSoFast CX-44 Panels
10% Better Performance
3” More Interior Space

InSoFast CX 44 Wall Assembly

Component	R-Value	Assembly R-Value
Interior air film	.68	
1/2” drywall	.45	
CX 44 panel	11.0	
Container sidewall	0	
Exterior air film	.17	
R-Value	12.63	
U-Value	.079	
Total InSoFast Wall Assembly R-Value		**12.3** (U=.08)

R-15 Cavity Insulation with 2x4 Framing Assembly

2x4 Framing		Cavity Insulation		Assembly R-Value
Component	R-Value	Component	R-Value	
Interior air film	.68	Interior air film	.68	
1/2” drywall	.45	1/2” drywall	.45	
2x4 stud	4.38	R-15 cavity insulation	15.0	
Container sidewall	0	Container sidewall	0	
Exterior air film	.17	Exterior air film	.17	
R-Value	5.68	R-Value	16.3	
U-Value	.17	U-Value	.06	
% framing at 16” o.c.	25%	% insulation at 16” o.c.	75%	
Total Framed/Insulated Wall Assembly R-Value				**11.11*** (U=.09)

* Calculating Assembly Wall R-Value Formula: 1 / (Assembly U-Value) = 1 / (U-Value of studs x %) + U-Value of cavity x %)

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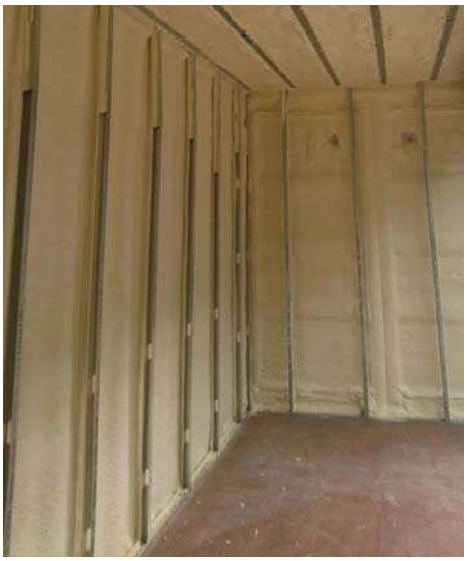
Shipping Container R-Value Comparison

Flat 2x4 Framing with 1-1/2" Foam Board Assembly				
Flat 2x4 Framing		Cavity Insulation		Assembly R-Value
Component	R-Value	Component	R-Value	
Interior air film	.68	Interior air film	.68	
1/2" drywall	.45	1/2" drywall	.45	
2x4 stud	1.88	1-½" cavity insulation	7.5	
Container sidewall	0	Container sidewall	0	
Exterior air film	.17	Exterior air film	.17	
R-Value	3.18	R-Value	8.8	
U-Value	.314	U-Value	.114	
% framing at 16" o.c.	30%	% insulation at 16" o.c.	70%	
Total Framed/Insulated Wall Assembly R-Value				**5.75*** (U=.174)

Metal framing can steal half of the R-value in a shipping container.

Thermal bridging in traditional home construction has been addressed with continuous insulation on the exterior of homes. A steel container in itself is one large thermal bridge. The cold or heat passes easily through metal or wood studs. Offsetting the studs does provide some disconnect but the reduced insulation at that point will still allow heat transfer. InSoFast panels are designed as continuous insulation. The natural of the stud material along with the "H" style beam of the stud allows only minimal transfer.



ASHRAE 90.1 Correction Factors for Metal Wall Framing				
Stud Size	Stud Spacing	Cavity Insulation	Correction Factor	Effective R-value
2 x 4	16" o.c.	R-11	.50	R-5.5
		R-13	.46	R-6.0
		R-15	.43	R-6.4
2 x 4	24" o.c.	R-11	.60	R-6.6
		R-13	.55	R-7.2
		R-15	.52	R-7.8

American Society of Heating, Refrigerating and Air-Conditioning Engineers

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