

1. Optional Mortar Bed

It is recommended that the first course of Durisol Wallforms be set in a ½" bed of mortar. It is also possible to substitute mortar with other leveling materials, if desired. This leveling bed will allow the first course to be set perfectly level and make the construction of subsequent courses easier, and faster. All other courses are dry-stacked (without mortar).

2. Leveling Shims

Since there is no mortar between the courses of Wallforms, it will become necessary to compensate for variations between individual Wallform units. It is recommended that every second or third course is leveled as you build, using any one of the following:

- Conventional cedar shims from your local hardware store
- Specialty plastic shims that may be available in your area
- Conventional masonry mortar
- Spray foam or construction adhesive
- Using coarse thread screws (deck screws) to screw the units together (vertically and horizontally). Conventional nails can also be used.

3. Wall Reinforcing

The steel rebar schedule for each wall is project specific and must be designed by a professional engineer.

4. Lintel Reinforcing

Steel rebar over openings is project specific and must be designed by a professional engineer.

5. Concrete Fill

Typical Concrete designs range between 17 MPa – 25 MPa (2500 psi – 3600 psi) and use a max 3/8" aggregate size. Download our construction specification document for more information.

6. Lintel Form (Cut on-site)

Lintel Wallforms are created on-site by removing the webs from a conventional Square End unit and turning the block 90 degrees so that the closed end is on the bottom.

7. Square End Form

These units are used at the sides of openings to prevent concrete from pouring out during construction. These units are not always necessary and it is also acceptable to use Standard units (without a closed end) in conjunction with conventional wood bucks to frame the openings. Download our Tech guide for details.

8. Corner Form

Corner Forms are specially notched to allow the concrete to flow around the corner into the adjacent wall. Most units measure 24" x 12" to maintain the desired 12" module. Refer to our Product Dimensions for more information

9. Insulation Inserts

All insulation inserts are manufactured from rockwool mineral fibre insulation. We do not use any polystyrene in our products whatsoever.

1.8 Standard Wall Forms (SI)

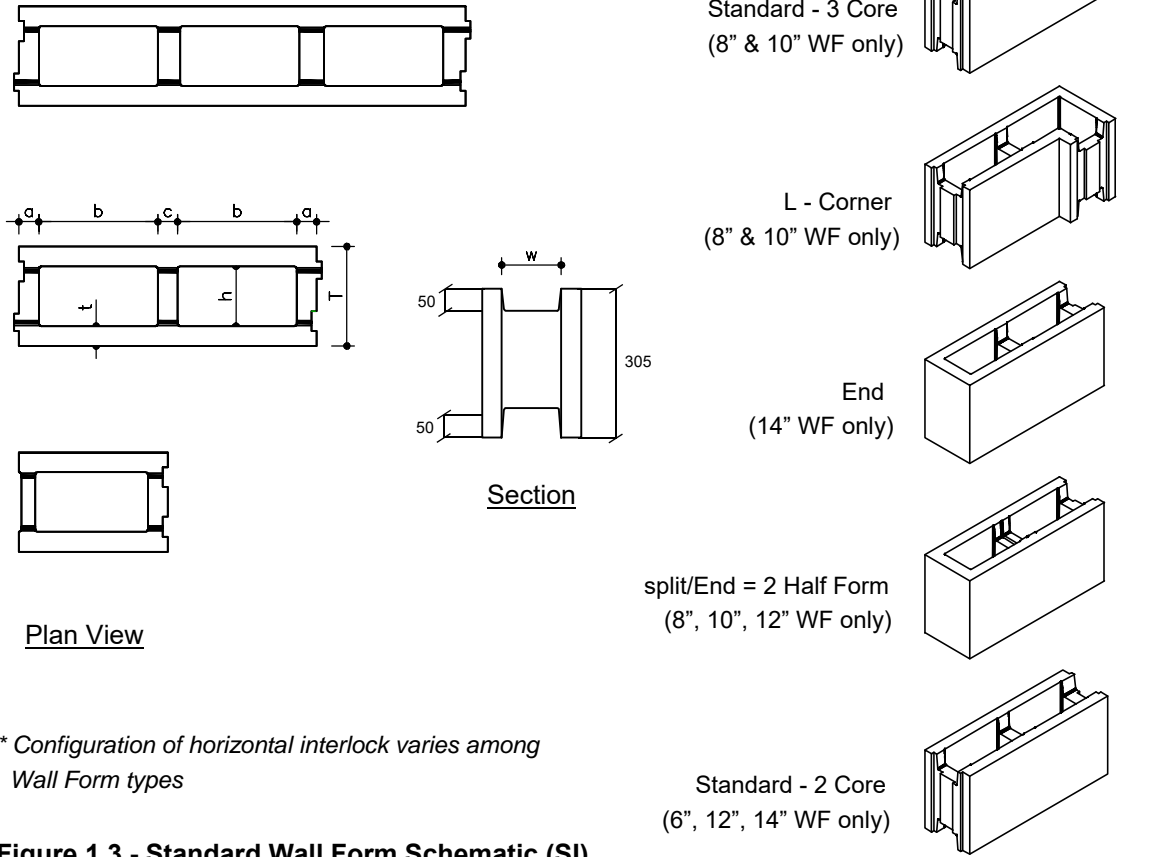


Figure 1.3 - Standard Wall Form Schematic (SI)

Table 1.6 - Standard Wall Form Dimensions (SI)

Wall Form Type	Wall Form Weight (kg)	FORM DIMENSIONS							CONCRETE CORE DATA	
		T (mm)	t (mm)	a (mm)	c (mm)	w (mm)	b (mm)	h (mm)	X-Sect Area (mm ²)	Fill Volume (m ³ / m ²)
6" WF	8	150	35	46	46	80	233	80	18650	0.073
8" WF	15	200	40	43	38	120	238	120	28000	0.109
10" WF	18	255	42	45	45	172	242	172	41500	0.142
12" WF	14	305	45	45	45	216	238	216	51400	0.182
14" WF	17	360	45	51	48	265	232	265	61500	0.225

1.9 Thermal Wall Forms (Imperial)

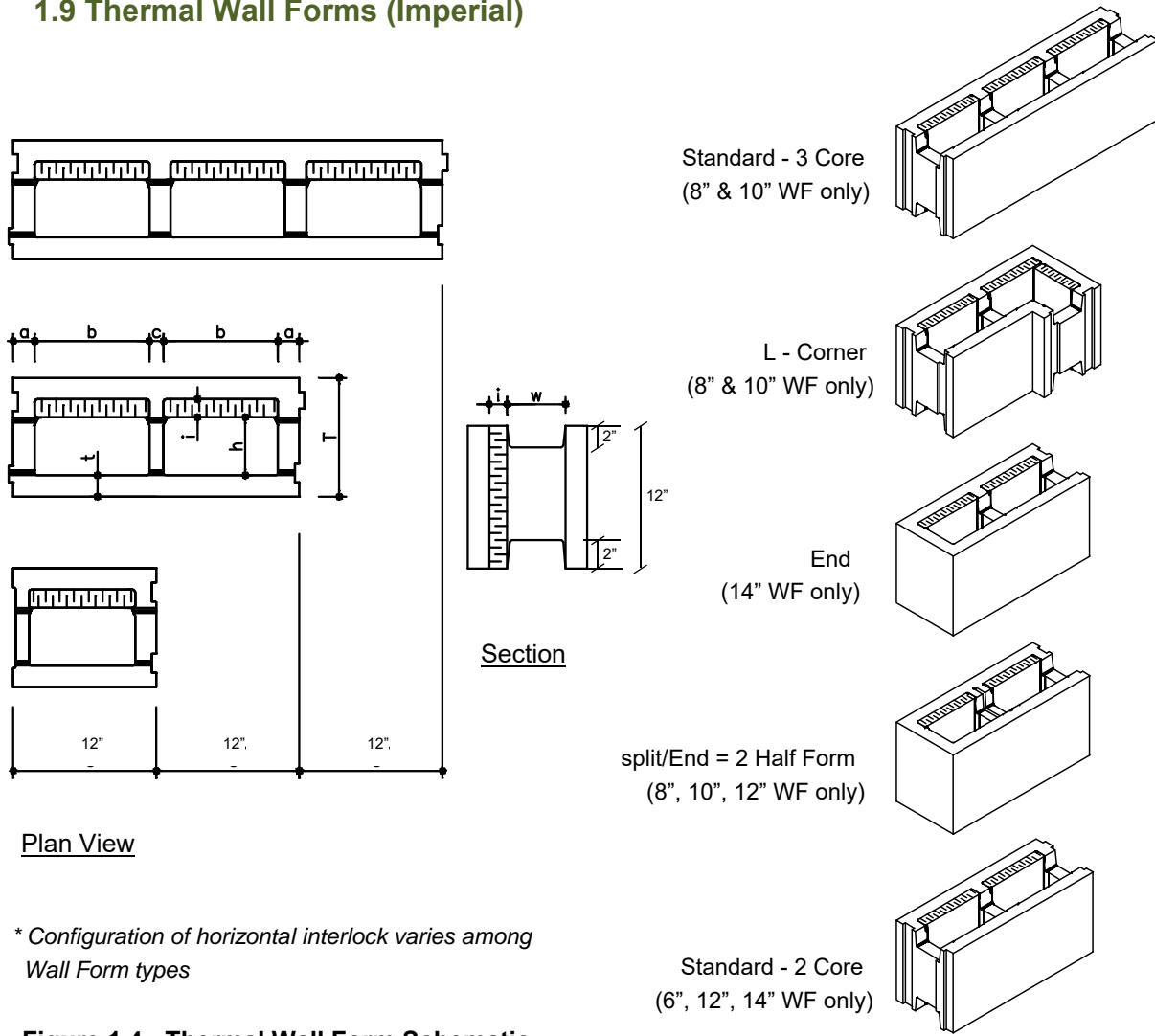
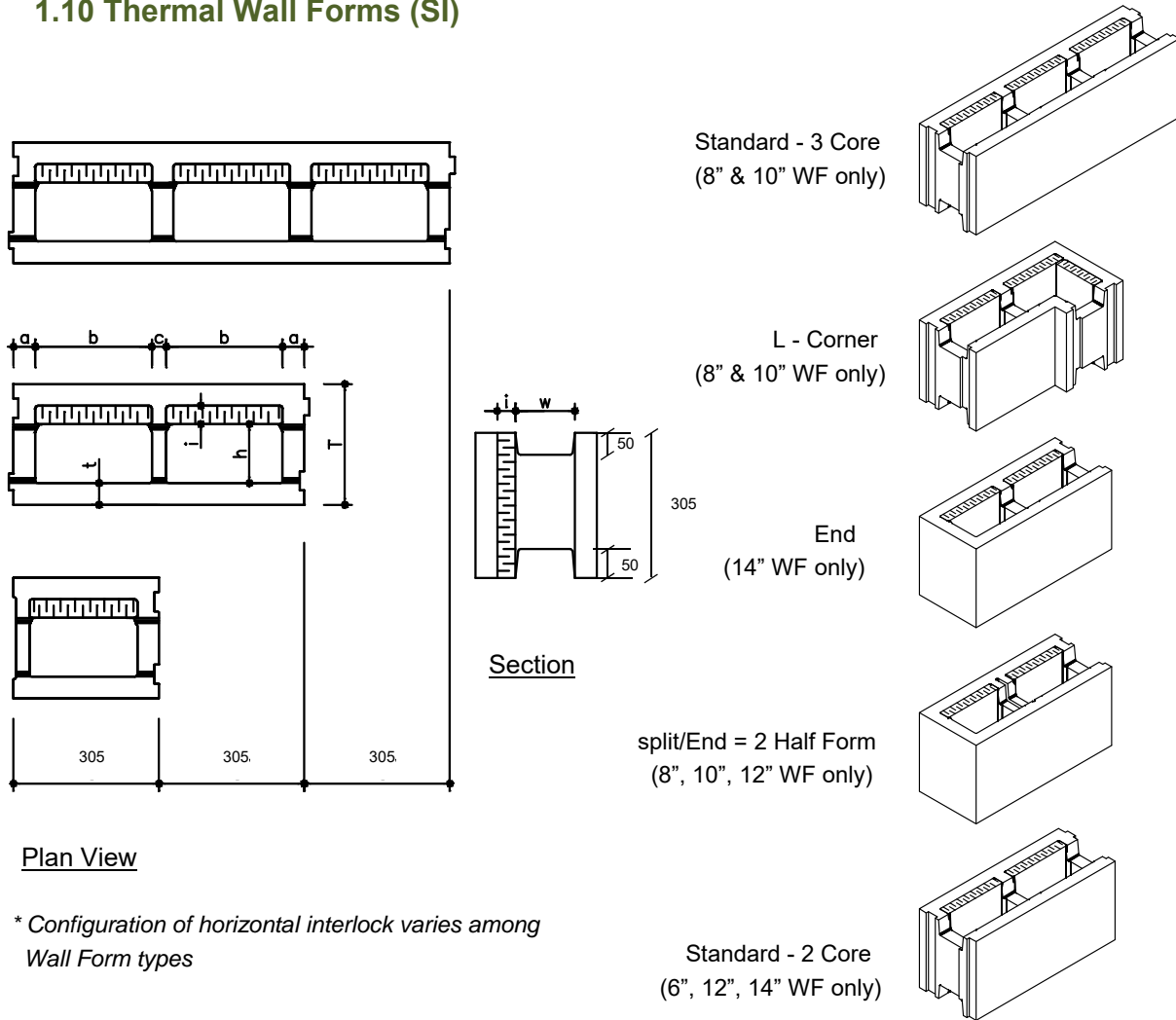


Figure 1.4 - Thermal Wall Form Schematic

Table 1.7 - Thermal Wall Form Dimensions (Imperial)

Wall Form Type	Wall Form Weight (lbs)	FORM DIMENSIONS								CONCRETE CORE DATA	
		T (in)	t (in)	a (in)	c (in)	w (in)	i (in)	b (in)	h (in)	X-Sect Area (in ²)	Fill Volume (yd ³ / ft ²)
10" WF (R-14)	43	10	1 3/4	1 3/4	1 3/4	5 1/4	1 1/2	9 1/2	5 1/4	49.9	0.0130
12" WF (R-14)	35	12	1 3/4	1 3/4	1 3/4	7	1 1/2	9 3/8	7	65.6	0.0180
12" WF (R-22)	39	12	1 3/4	1 3/4	1 3/4	5 1/2	3	9 3/8	5 1/2	52.3	0.0130
14" WF (R-14)	39	14	1 3/4	2	1 3/4	9	1 1/2	9 1/8	9	82.1	0.0230
14" WF (R-22)	41	14	1 3/4	2	1 3/4	7 1/2	3	9 1/8	7 1/2	68.4	0.0180
14" WF (R-28)	44	14	1 3/4	2	1 3/4	5 1/2	5	9 1/8	5 1/2	50.2	0.0120

1.10 Thermal Wall Forms (SI)



Plan View

* Configuration of horizontal interlock varies among Wall Form types

Figure 1.5 - Thermal Wall Form Schematic (SI)

Table 1.8 - Thermal Wall Form Dimensions (SI)

Wall Form Type	Wall Form Weight (kg)	FORM DIMENSIONS (mm)								CONCRETE CORE DATA	
		T	t	a	c	w	i	b	h	X-Sect Area (mm ²)	Fill Volume (m ³ / m ²)
10" WF (R-14)	20	254	45	45	45	133	38	241	133	32100	0.109
12" WF (R-14)	18	305	45	45	45	178	38	238	178	42300	0.143
12" WF (R-22)	19	305	45	45	45	140	76	238	140	33700	0.105
14" WF (R-14)	19	360	45	51	48	227	38	232	227	52650	0.186
14" WF (R-22)	20	360	45	51	48	190	76	232	190	44100	0.148
14" WF (R-28)	21	360	45	51	48	138	127	232	138	32100	0.098

1.11 Wall System Summary

The following Tables summarize the Wall Forms and overall wall systems that are possible using the insulated Nexcem Wall Forms.

Table 1.9 – Wall Form Types and Availability (Nominal Dimensions)

Wall Form Shape	Size (height x length)	AVAILABILITY				
		6" WF	8" WF	10" WF	12" WF	14" WF ²
Standard 3 Core	(12" x 36")	x	✓	✓	x	x
L - Corner (2 Core) ¹	(12" x 24")	x	✓	✓	x	x
Corner (Modified End)	(12" x 24")	✓	x	x	✓	✓
End (2 Core)	(12" x 24")	x	x	x	x	✓
Split/End (2 Core)	(12" x 24")	x	✓	✓	✓	x
Standard 2 Core	(12" x 24")	✓	x	x	✓	✓

¹ All Corner Wall Forms are L-shaped with 12" return. Since the 12" WF has a thickness of 12" , the corner unit is a modified End Unit.

² Corner units for the 14" WF are an "assembly" of 2 units that 24" and 36" long respectively. These units meet together at the corner (at a 45 degree angle) and cover a total of 5 square feet per assembly unit. Refer to product drawings for more detailed information.

Table 1.10 - Wall System Summary

Wall Thickness	R-Value	Concrete Thickness (in)	Fill Vol. (yd ³ / ft ²)	Weight of Wall (LB / ft ²)
6"	8	3 1/8	0.0089	50
8"	8	4 3/4	0.0132	69
10"	8	6 3/4	0.0173	87
10"	14	5 1/4	0.0132	82
12"	8	8 1/2	0.0222	112
12"	14	7	0.0174	94
12"	22	5 1/2	0.0127	76
14"	8	10 3/8	0.0273	137
14"	14	9	0.0227	118
14"	22	7 1/2	0.018	100
14"	28	5 1/2	0.0118	76

Note:

- 6" WF is not typically intended for use as a load-bearing wall.
- Shaded area highlights the insulated Nexcem units with sufficient concrete to provide adequate structural capacity for situations requiring greater than 4ft of soil retention (unbalanced fill).