Typical Lateral Load Capacities & Bending Moments

As every project has its own special requirements you should always consult a structural engineer with respect to wall design.
These tables however can be used as a guide to assist design.

Unreinforced Benex wall - Lateral Load Capacity (kPa)

Wall Height (m)	Length between vertical supports (m)				Bending Moment		
	2.4	4.2	6.0	9.0			
10.0	0.81				Vertical	0.580	kN.m/m
8.0	0.81						
6.0	0.96	0.80	0.58				
4.0	1.32	1.18	0.59		Horizontal	0.815	kN.m/m
2.4	3.63	1.26	0.81	0.81			

Benex Grid Core-filled wall reinforced with N16 @2.4m - Lateral Load Capacity (kPa)

Wall Height (m)	Length between vertical supports (m)				Bending Moment		
	2.4	4.2	6.0	9.0			
10.0	2.26	0.74			Vertical	1.630	kN.m/m
8.0	2.26	0.74					
6.0	2.26	0.88	0.58				
4.0	2.46	1.24	0.94	0.81	Horizontal	1.220	kN.m/m
2.4	3.61	2.40	2.26	2.26			

Benex Grid Core-filled Wall reinforced with N16 @ 1.2m - Lateral Load Capacity (kPa)

Wall Height (m)	Length between vertical supports (m)				Bending Moment		
	2.4	4.2	6.0	9.0			
10.0	4.52	1.47	0.72		Vertical	3.250	kN.m/m
8.0	4.52	1.47	0.72				
6.0	4.52	1.76	1.16	0.84			
4.0	4.91	2.48	1.88	1.63	Horizontal	2.440	kN.m/m
2.4	7.23	4.79	4.52	4.52			

Benex Core-filled Wall reinforced with N16 @ 0.6m - Lateral Load Capacity (kPa)

Wall Height (m)	Length between vertical supports (m)				Bending Moment		
	2.4	4.2	6.0	9.0			
10.0	6.70	2.21	1.08		Vertical	4.880	kN.m/m
8.0	6.70	2.21	1.08				
6.0	6.77	2.64	1.73	1.25			
4.0	7.37	3.72	2.82	2.44	Horizontal	4.880	kN.m/m
2.4	10.84	7.19	6.77	6.77			

Note: Reinforcing is installed both vertically and horizontally at the specified distances

Working with Benex

- Benex is a structural solution when not core-filled. Benex can be core-filled and reinforced should your project require addition strength. Check with your project engineer.
- Benex recommends waiting approximately 48 hours after the wall has been installed before core filling the Benex Wall.
- When core filling is required, Benex walls should be core-filled in 3 metre increments.
- Benex recommends allowing 10 days for a Benex retaining/basement wall to cure before back filling. This timing is dependent on the curing time of the core-fill mixture and should always be checked with your project engineer.
- Benex recommends that you do not install the product if it is wet after rain. However, unlike traditional concrete products, Benex being impervious to water dries quickly and can be installed soon after the rain stops.
- Benex is a hollow building unit and can also be supplied with a notched base to accept horizontal reinforcement. The workability and texture of Benex ensures this can be completed much more efficiently than traditional concrete methods.
- Benex does not require additional waterproofing if installed correctly. However, if you are unsure of the quality of the foundations then a membrane can be installed as added insurance. Mortar bed requires either a waterproofing additive or waterproofing for first course only.
- Benex can be directly drilled into without cracking.
- A 210mm – 220mm wet-saw is the best to cut Benex. A Tungsten Carbide Tipped hand saw can also be used.
- For smooth clean cut circular holes pre-drill the pilot as a guide (this is not required, most hole saws have a drill bit in them), use a hole saw to cut the appropriate diameter. Small rectangular or circular holes can be cut by drilling a series of small holes around the perimeter then tapping out the wasted piece. Tap carefully.
- To patch a Benex Wall, mix the BenexMix Adhesive into a thick paste and apply using a broad knife or similar. Once the BenexMix in the damaged area starts to dry, sponge the area and the adhesive will cure to a similar colour of the block. It may be necessary to reapply for larger damaged areas.

BenexMix Adhesive

- You cannot substitute mortar for BenexMix Adhesive on all of the courses. Brickies Mortar is used ONLY to bed the first course of the Benex Wall.
- Benex recommends the Benex Glue Guns to apply the BenexMix Adhesive. The use of a Brickies Trowel is not recommended.

Render

- You do not need to render a Benex Wall as the wall provides an aesthetic face finish. Personal preference will influence how the client chooses to complete the finished wall.
- You can render on either the smooth or the rough side of the block.
- The most appropriate render to use on a Benex Wall is either an acrylic or cement based render. Please see website for further details.