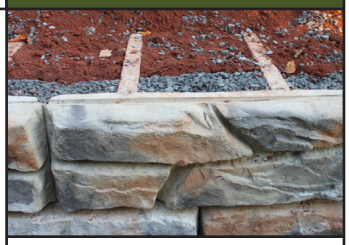
FORIX

Precast Modular Wall System



Forix is a concrete precast modular block retaining wall system, large in size yet economical in weight and possesses **UNPRECEDENTED ENGINEERING EFFICIENCY.**

The unique features of the Forix retaining wall system includes:

- Triangular geometry of rear legs create an arching effect with backfill resulting in downward pressure on block units for stability
- Less freight weight and manufacturing costs when compared to solid precast concrete wall units
- Various face impressions available including natural stone finish
- Capable of turning radii
- 90 degree corner unit available
- Constructible with or without cap unit, or with traffic barrier as required by site conditions
- Automatic vertical alignment control by means of lugs on bottom of units
- Can be designed and constructed taller than conventional gravity height walls using polymer geogrid reinforcement, including mechanical (positive) geogrid connection

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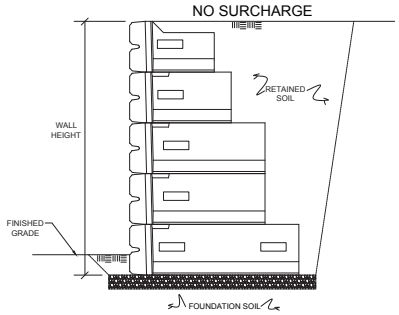
ESTIMATING CHARTS



FORIX STANDARD TYPICAL CROSS SECTION

No Surcharge, γ = 120 PCF

Φ = 28˚ Silt/Clayey Soils

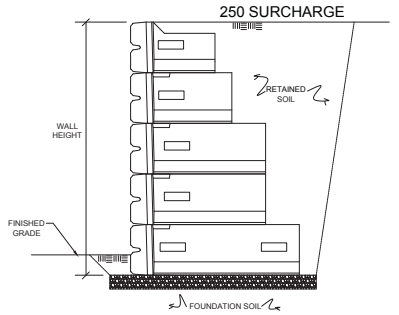
Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	3	1	0	0	0
7.5'	2	2	1	0	0
9.0'	2	2	1	1	0
10.5'	1	0	2	4	1
12.0'	1	1	1	0	5
13.5'					
15.0'					
16.5'					
18.0'					
19.5					
21.0'					
22.5'					

Φ = 30˚ Sandy Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	3	1	0	0	0
7.5'	1	4	0	0	0
9.0'	3	2	1	0	0
10.5'	3	2	1	1	0
12.0'	2	1	1	4	0
13.5'	2	1	2	2	2
15.0'	1	0	0	1	8
16.5'					
18.0'					
19.5					
21.0'					
22.5'					

Φ = 34˚ Gravel Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	4	0	0	0	0
7.5'	4	1	0	0	0
9.0'	1	5	0	0	0
10.5'	3	2	2	0	0
12.0'	1	1	6	0	0
13.5'	3	2	2	2	0
15.0'	1	0	1	8	0
16.5'	2	2	3	2	2
18.0'	1	0	1	1	9
19.5					
21.0'					
22.5'					



FORIX STANDARD TYPICAL CROSS SECTION

250 PSF Surcharge, γ = 120 PCF

Φ = 28˚ Silt/Clayey Soils

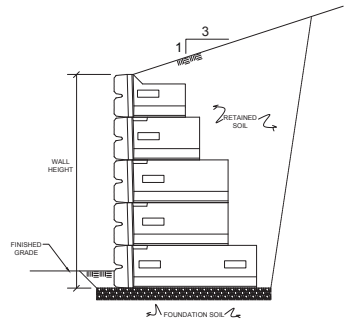
Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	0	2	0	0	0
4.5'	0	2	1	0	0
6.0'	0	2	1	1	0
7.5'	0	2	1	1	1
9.0'	0	2	0	2	2
10.5'					
12.0'					
13.5'					
15.0'					
16.5'					
18.0'					
19.5					
21.0'					
22.5'					

Φ = 30˚ Sandy Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	0	2	0	0	0
4.5'	0	2	1	0	0
6.0'	0	2	2	0	0
7.5'	0	2	2	1	0
9.0'	0	1	1	4	0
10.5'	0	2	1	2	2
12.0'	1	1	1	0	5
13.5'					
15.0'					
16.5'					
18.0'					
19.5					
21.0'					
22.5'					

Φ = 34˚ Gravel Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	1	1	0	0	0
4.5'	1	2	0	0	0
6.0'	1	3	0	0	0
7.5'	1	2	2	0	0
9.0'	1	2	3	0	0
10.5'	1	2	2	2	0
12.0'	1	2	0	5	0
13.5'	1	2	2	2	2
15.0'	1	1	1	2	5
16.5'					
18.0'					
19.5					
21.0'					
22.5'					



FORIX STANDARD TYPICAL CROSS SECTION

3:1 Surcharge, γ = 120 PCF

Φ = 28˚ Silt/Clayey Soils

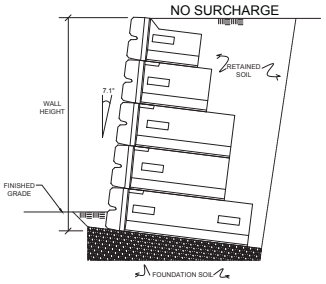
Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	2	1	0	0	0
6.0'	0	1	3	0	0
7.5'	0	0	1	4	0
9.0'					
10.5'					
12.0'					
13.5'					
15.0'					
16.5'					
18.0'					
19.5					
21.0'					
22.5'					

Φ = 30˚ Sandy Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	2	1	0	0	0
6.0'	0	4	0	0	0
7.5'	0	1	4	0	0
9.0'	0	1	1	4	0
10.5'	1	2	1	1	2
12.0'					
13.5'					
15.0'					
16.5'					
18.0'					
19.5					
21.0'					
22.5'					

Φ = 34˚ Gravel Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	3	1	0	0	0
7.5'	2	3	0	0	0
9.0'	0	1	4	0	0
10.5'	2	1	1	4	0
12.0'	2	1	2	3	0
13.5'	2	1	2	2	2
15.0'					
16.5'					
18.0'					
19.5					
21.0'					
22.5'					



FORIX STANDARD TYPICAL CROSS SECTION

7.1˚ Batter, No Surcharge, γ = 120 PCF

Φ = 28˚ Silt/Clayey Soils

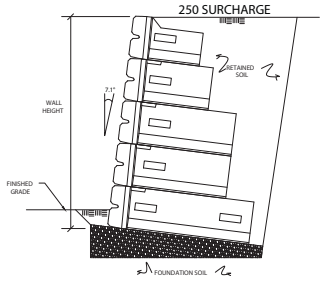
Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	4	0	0	0	0
7.5'	3	2	0	0	0
9.0'	3	3	0	0	0
10.5'	3	3	1	0	0
12.0'	3	1	4	0	0
13.5'	3	2	3	1	0
15.0'	2	1	2	5	0
16.5'	2	2	1	4	2
18.0'	1	1	0	5	5
19.5					
21.0'					
22.5'					

Φ = 30˚ Sandy Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	4	0	0	0	0
7.5'	5	0	0	0	0
9.0'	4	2	0	0	0
10.5'	2	5	0	0	0
12.0'	4	2	2	0	0
13.5'	2	1	6	0	0
15.0'	3	3	2	2	0
16.5'	3	1	0	7	0
18.0'	3	2	1	4	2
19.5	1	1	1	1	9
21.0'					
22.5'					

Φ = 34˚ Gravel Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	3	1	0	0	0
7.5'	3	2	0	0	0
9.0'	2	4	0	0	0
10.5'	3	2	2	0	0
12.0'	2	1	5	0	0
13.5'	3	2	2	2	0
15.0'	2	1	2	5	0
16.5'	3	2	2	2	2
18.0'	3	2	1	1	5
19.5	1	1	1	2	8
21.0'					
22.5'					



FORIX STANDARD TYPICAL CROSS SECTION

7.1˚ Batter, 250 PSF Surcharge, γ = 120 PCF

Φ = 28˚ Silt/Clayey Soils

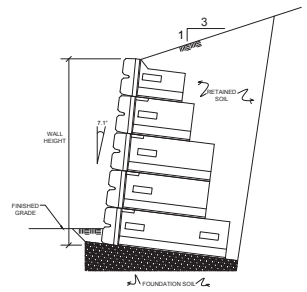
Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	2	1	0	0	0
6.0'	1	3	0	0	0
7.5'	2	2	1	0	0
9.0'	2	0	4	0	0
10.5'	2	1	1	3	0
12.0'	2	2	1	1	2
13.5'	2	1	1	1	4
15.0'					
16.5'					
18.0'					
19.5					
21.0'					
22.5'					

Φ = 30˚ Sandy Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	2	1	0	0	0
6.0'	2	2	0	0	0
7.5'	1	4	0	0	0
9.0'	2	3	1	0	0
10.5'	2	3	2	0	0
12.0'	2	3	2	1	0
13.5'	2	3	2	2	0
15.0'	0	1	0	9	0
16.5'	2	2	1	2	4
18.0'					
19.5					
21.0'					
22.5'					

Φ = 34˚ Gravel Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	3	1	0	0	0
7.5'	3	2	0	0	0
9.0'	2	4	0	0	0
10.5'	3	2	2	0	0
12.0'	2	1	5	0	0
13.5'	3	2	2	2	0
15.0'	2	1	2	5	0
16.5'	3	2	2	2	2
18.0'	3	2	1	1	5
19.5	1	1	1	2	8
21.0'					
22.5'					



FORIX STANDARD TYPICAL CROSS SECTION

7.1˚ Batter, 3:1 Surcharge, γ = 120 PCF

Φ = 28˚ Silt/Clayey Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	3	1	0	0	0
7.5'	3	1	1	0	0
9.0'	0	2	4	0	0
10.5'	3	0	1	3	0
12.0'	2	1	1	1	3
13.5'					
15.0'					
16.5'					
18.0'					
19.5					
21.0'					
22.5'					

Φ = 30˚ Sandy Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	4	0	0	0	0
7.5'	4	1	0	0	0
9.0'	3	2	1	0	0
10.5'	2	2	3	0	0
12.0'	3	2	1	2	0
13.5'	2	1	1	5	0
15.0'	2	1	1	1	5
16.5'					
18.0'					
19.5					
21.0'					
22.5'					

Φ = 34˚ Gravel Soils

Wall Height	Block Size Needed				
	30"	36"	48"	60"	72"
1.5'	1	0	0	0	0
3.0'	2	0	0	0	0
4.5'	3	0	0	0	0
6.0'	4	0	0	0	0
7.5'	5	0	0	0	0
9.0'	4	2	0	0	0
10.5'	1	6	0	0	0
12.0'	4	2	2	0	0
13.5'	1	1	7	0	0
15.0'	4	1	1	4	0
16.5'	4	2	2	1	2
18.0'	2	2	2	1	5
19.5	1	1	1	0	10
21.0'					
22.5'					

The soils effective friction angle and unit weight as outlined above is assumed to exist in the reinforced, retained, and foundation zones.

The information contained herein has been compiled by Earth Wall Products, LLC and to the best of our knowledge, accurately represents the Forix product use in the applications which are illustrated. Final determination of the suitability for the use contemplated and its manner of use are the sole responsibility of the user. Final structural design and analysis shall be performed by a qualified engineer.

For assistance with stamped final designs by a professional engineer call 678.594.3451.

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