EP HENRY®

MARQUIS™ WALL TECHNICAL INSTALLATION GUIDE

CALCULATING THE QUANTITY OF BLOCK

Marquis Wall™ blocks measure 8" x 6" x 16". The face of each unit is .66 of a square foot. Therefore, it takes 1.5 Marquis Wall™ units to build 1 square face foot of retaining wall. Use the calculating table below to quickly estimate the number of block needed. One Marquis Wall™ corner unit is used on each course for every 90° corner in the wall. Remember to deduct the number of corner block from the total number of stretcher units needed. For larger walls simply multiply the total square face footage of the wall by 1.5 to estimate the number of block needed. 5% overage for cuts, waste etc.

MARQUIS WALL CALCULATOR

		WALL LENGTH																	
		1′4″	2′8″	4′0″	5′4″	6′8″	8′0″	9′8″	10′8″	12′	13′4″	14′8″	16′	17′4″	18′8″	20′	21′4″	22′8″	24′
WALL HEIGHT UNDER 3'	6″	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	1′	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
	1.5″	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54
	2′	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72
	2.5″	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
	3′	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108
* WALL HEIGHT OVER 3'	3.5″	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105	112	119	126
	4′	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144
	4.5″	9	18	27	36	45	54	63	72	81	90	99	108	117	126	135	144	153	162
	5′	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
	5.5″	11	22	33	44	55	66	77	88	99	110	121	132	143	154	165	176	187	198
	6′	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216
	6.5″	13	26	39	52	65	78	91	104	117	130	143	156	169	182	195	208	221	234
	7′	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210	224	238	252
	7.5″	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
	8′	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240	256	272	288
	8.5″	17	34	51	68	85	102	119	136	153	170	187	204	221	238	255	272	289	306
	9′	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270	288	306	324
	9.5″	19	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323	342
	10′	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360

Maximum unreinforced wall height is 30″ (5 courses) under ideal conditions.
** Per NCMA Guidelines it is recommended that all walls over 3′ be reinforced with geogrid.*

Stretcher Unit Size	16″ x 12″ x 6″	Weight: Approx. 75 lbs.
Corner Unit Size	16″ x 8″ x 6″	Weight: Approx. 45 lbs.
3″ Universal Marquis Wall Cap	16/14″ x 11 5/8″ x 3″	Weight: Approx. 44 lbs.

PREPARE THE FOOTING

Dig a trench 24" wide and a minimum of 12" below grade. Make sure the soil at the bottom of the trench is smooth, level, and well compacted to prevent settling. For best results and long term structural stability, wrap the footer trench with geotextile in a “U” shape configuration. This will preserve the stone base over time and keep it from migrating into the soil. Using a vibratory plate compactor install 6" of dense graded aggregate or # 57 clean stone (comprised of 1¼", ¾", and ½") in two 3" layers making sure the surface of last layer is smooth and level.

TIP: If dense graded aggregate was used as the stone base in the footer add a uniform 1" layer of coarse washed concrete sand or stone screenings as a leveling pad on top of the stone base to make leveling the base course of block easier.

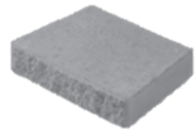
INSTALL THE BASE COURSE USING MARQUIS WALL™

Install the base course of Marquis Wall™ by placing the units in the center of the footer on the prepared stone base or leveling pad. At a minimum, one full course of Marquis Wall™ block must be installed below grade. For straight runs set a taut string line to align the base course block; setting the block so the back of the block just touches the string line. Level the Marquis Wall™ base course units from front to back and side-to-side using a dead blow hammer and level. Fill the space in front and behind the base course with the same stone used in the footer.

NOTE: Ask your EP Henry Authorized Hardscaping Distributor® about the Marquis Wall™ block lifter. Using it will make handling and setting the block much easier and will save time in building the wall. (*See photo on page 4.*)

BACKFILL THE UNITS

For proper drainage, backfill at least 12" behind each course of Marquis Wall™ with #57" clean stone (comprised of 1-¼", ¾", and ½") or # 67 (¾") clean stone. Then back fill any additional excavated space behind the drainage stone with the excavated soil if it is suitable. All backfill in the disturbed areas behind the units must be filled and compacted in 3"–4" lifts using a vibratory plate compactor.

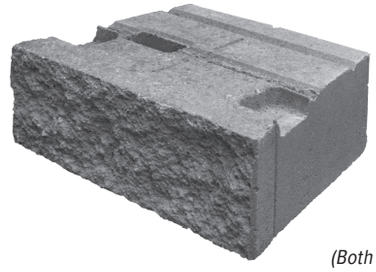


	STRETCHER*	CORNER	3" UNIVERSAL DOUBLE FACE CAP
SIZE (LxD)	16" x 12" x 6"	16" x 8" x 6"	16"/14" x 11 5/8" x 3"
PCS PER SF	1.5	1.5	3.2
SF PER CUBE	32	72	30
PC PER CUBE	48	108	96
LBS PER PIECE	75	45	43.5
LBS PER CUBE	3,685	4,838	4,177

*each cube of stretchers will contain approximately 1/3 splittable units.

INSTALLING ADDITIONAL COURSES

Place the next and additional courses of Marquis Wall™ in such a fashion that each block bridges over two units below in a running bond pattern. Marquis Wall™ may be built as a vertical or battered wall system. (*See diagram on page 4.*) As you install additional courses, place a Marquis Wall™ pin in the center slots of each block on all courses except the top course that will be capped. Set the next course of Marquis Wall™ in place, nesting each block on the pins in the course below.



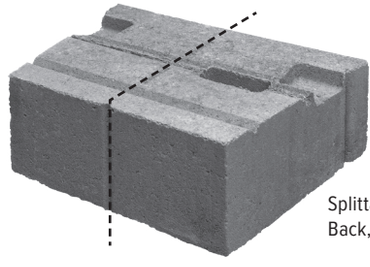
Splittable Stretcher, bottom of unit

(Both units shown upside-down to show hand-holds.)

GEOGRID REINFORCEMENT

The maximum unreinforced height of Marquis Wall™ under ideal conditions is 2.5 times the 12" depth of the block or 30" of exposed wall, including the cap. Under ideal conditions walls taller than 30" should be reinforced with geogrid or stabilized aggregate. Under conditions that are less than ideal geogrid should be used for wall less than 30" tall. Contact your EP Henry Authorized Hardscaping Distributor or EP Henry for geogrid estimating charts.

NOTE: One in four Marquis Wall™ stretchers has only one pin slot with a groove running front to back for creating half blocks to break the bond of the wall courses. (*See image on right.)*



Splittable Stretcher Back, bottom of unit

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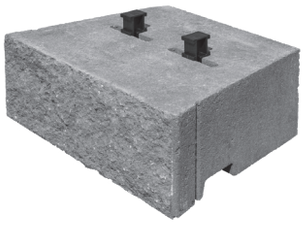
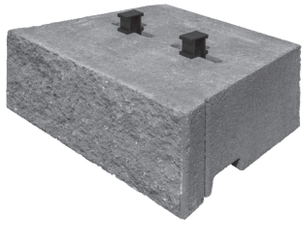
BATTERING THE WALL

For better structural stability and to increase resistance to surcharge and lateral force from behind the wall, batter/ set back each course of Marquis Wall™ by placing the Marquis Wall™ pin with the extended head of the pin facing toward the back of the wall. All walls 30" or taller should be battered /set back. To build Marquis Wall™ vertically, set the Marquis Wall™ pins with the extended head of the pin facing toward the front of the wall. *(See the diagram below.)*



Marquis Wall block unit with pins, battered alignment



Marquis Wall block unit with pins, vertical alignment

BATTERED ALIGNMENT
For walls with a set-back, insert pin as shown above.

Marquis Wall pin

VERTICAL ALIGNMENT
For walls without a set-back, insert pin as shown above.

NOTE: Using the Marquis Wall Pin can increase the shear strength of the wall by as much as 9.5 times in low wall construction.

CAPPING THE WALL

Universal Marquis Wall™ Caps are 16"/14" x 11⅝" x 3" and may be cut as needed to fit with a diamond blade saw, making sure all OSHA precautions are followed. Attach the wall cap units with a high strength, flexible concrete adhesive. For best results make sure all caps and the block below are clean and dust free and the adhesive is applied within the manufacturers recommended temperature range with appropriate moisture conditions.

NOTE: The minimum inside radius for the Universal Marquis Wall™ caps is 22" to the back of the block. To achieve the minimum radius at the top of a battered wall each course below it must be 3/4" +/- wider than the course above it.

ADDITIONAL TIPS

BUILDING 90° CORNERS

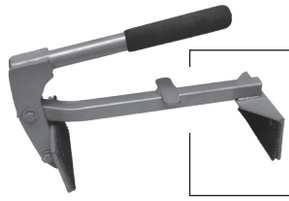
Marquis Wall™ corner units with a finished end and face are available for constructing 90° corners. When building corners each successive course must be set perpendicular to the course below using high strength flexible concrete adhesive.

CONSTRUCTING CURVED OR SERPENTINE WALLS

The tapered shape of Marquis Wall™ makes it easy to create curved walls without any additional work.

CONSTRUCTING STEPS

Attractive steps, in either straight or semi-circular designs, are easy to build with Marquis Wall™ units. The block units are used for the risers, with the block caps or another material, such as Bullnose Pavers, used for the tread. Use the EP Henry Step Filler Block in step applications to fill the interior step and landing cavity where the blocks will not be visible.



Ask your EP Henry Authorized Hardscaping Distributor about the Marquis Wall Block lifter.

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