SLABS

PATIOS, WALKWAYS, POOLSIDES & STEPPING STONES

PHYSICAL AND GEOMETRICAL CHARACTERISTICS

CHARACTERISTICS		ASTM C1782	CSA A231.1:19
Flexural strength		725 psi [5.0 MPa]	5.0 MPa min.
Freeze-thaw durability		Mass loss (max.): 225 g/m² at 28 cycles, or Mass loss (max.): 500 g/m² at 49 cycles	Mass loss (max.): 225 g/m² after 28 cycles, or Mass loss (max): 500 g/m² after 49 cycles
Dimensional tolerances (see Notes below):	Length & Width	Units up to and including 24 in. [610 mm]: -0.04 in. [1.0 mm] and +0.08 in. [2.0 mm] Units over 24 in. [610 mm]: -0.06 in. [1.5 mm] and +0.12 in. [3.0 mm]	-1.0 mm to +2.0 mm
	Thickness	± 0.12 in. [3.0 mm]	± 3.0 mm
	Warpage	± 0.08 in. [2.0 mm] (Units up to and including 17.75 in. [450 mm])	± 2.0 mm (Units up to and including 450 mm)
		± 0.12 in. [3.0 mm] (Units over 17.75 in. [450 mm])	± 3.0 mm (Units over 450 mm)

Notes:

1. The dimensional tolerances shown above are prior to the application of architectural finishes.
2. The dimensional tolerances (length, width, thickness, and warpage) stated above apply for dry cast slabs only. In order to obtain a more realistic appearance to natural stone, wet cast (Stonedge collection) slabs are intended to have a slightly larger variance in their dimensions than dry cast slabs. Stonedge collection of wet cast slabs include, but are not limited to, the following products: Aberdeen, Borealis, Inca, Maya and Travertina Raw.

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INSTALLATION OUTLINE

01 EXCAVATION

A. Before excavating, call all the local utility companies (e.g., phone, gas, electrical) to ensure that the area in which you plan to dig is clear of underground cables or wires. If any are found, please notify the appropriate companies before you continue.

B. When excavating, it is important to achieve a slope in increments of 3⁄16″ per ft (5 mm per 300 mm) which will allow for proper drainage. The excavation should mirror final grade of pavement.

C. The width of the base behind the edge should be equivalent to the thickness of the base.

D. With the help of a rake, grade the bottom of the excavated area. If the natural soil is granular or sandy we recommend that you compact the soil with a vibrating plate. If the soil is clay-like, change the soil with a blend of lime and crushed stone prior to compaction. Next, cover it with a layer of geotextile membrane to prevent the contamination of the base (clay and 0-¾″ [0-20 mm] crushed stone). Refer to the table ″**Thickness of the Granular Foundation**″ (on next page) to find the minimum thickness of foundation required.

02 FOUNDATION

A. Install the 0-¾″ (0-20 mm) crushed stone base in 4″ (100 mm) lifts with a minimum 5,000 lbf (22 kN) vibrating plate compactor.

B. To facilitate compacting, wet the base material thoroughly and compact with a vibrating plate proceeding in all directions. Continue this process until you achieve the desired height. At this stage, you can verify the final height with the help of a paver.

C. Base tolerance ± ⅜″ (10 mm) for every 10′ (3-m) increment.

03 THE SETTING BED

A. On the compacted crushed base, install two pipes with an outside diameter of 1″ (25 mm). Grade the concrete sand with the help of a straight edge (or Quick-E leveler). If the base isn't properly graded and smooth, imperfections will be evident in the finishing grade of the pavement.

B. Once the setting bed is graded, pre-compact with a hand tamper, then lightly fluff.

04 INSTALLATION OF SLABS

A. Once the choice of slabs and the design have been finalized, it is recommended you start installing the slabs at a 90-degree angle. To obtain a 90-degree angle, use the rule of a 3/4/5-triangle. To do this, proceed as follows: measure a first horizontal line of 3′ (1-m) and a second line of 4′ (1.2 m) perpendicular to the first. Connect a third straight line of 5′ (1.5 m), which will form a triangle, and the result will be a perfect 90-degree angle. While installing the slabs, walk on the installed slabs and fill in gaps caused by the pipes with concrete sand.

B. It is always recommended that you use more than two cubes at a time in order to maximize the color blends. Furthermore, you should proceed with the cubes from top to bottom.

C. You may use a chalk line to mark the stones to be cut along the borders, using a concrete saw. When cutting slabs, we recommend you wear protective ear and eyewear.

D. Once you finish installing the slabs, you can then install Belgik, Pietra, Tundra, or Avignon curbstone. To keep curbs in place, add mortar along the back between the ground and the curbstone or, when available, use their plastic retention systems.

05 FILLING IN JOINTS

A. Spread out the polymer stabilizer sand on the slabs, and sweep in between joints in all directions.

B. Remove excess sand and follow the instructions exactly as indicated on the polymer stabilizer sand packaging.

C. The use of a vibrating plate is not recommended on slabs.

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VIBRATING PLATE ALERT!

We do not recommend passing the vibrating plate on slabs.

THICKNESS OF THE GRANULAR FOUNDATION[1]

RESIDENTIAL PROJECTS	TYPE OF EXISTING SOIL	
	Clayey or Silty[2]	Sandy or Gravelly
Patios and Walkways	6″ to 8″ (150 to 200 mm) Minimum	4″ to 6″ (100 to 150 mm) Minimum

1. Data shown in this chart are provided as guidelines only. The range of values suggested depends particularly on existing soil conditions. The thicker the granular foundation, the greater the increase in stability of the whole structure.
2. In the case of unstable soils or ones particularly affected by the freeze-thaw cycles, a thicker foundation may be necessary. For soils with these conditions or for commercial, industrial, or institutional works, a geotechnical professional should be consulted.

QUANTITY CHART FOR JOINTS FILLING - FLEXLOCK POLYMERIC SAND

Approximate surface coverage per bag of 50 lbs (22.7 kg).

SLABS	size	sq. ft	sq. m
Aberdeen	30×30	483	44.87
	30×20	388	36.05
	30×10	243	22.56
	20×20	324	30.07
	20×10	216	20.08
Blu 60 mm		90.2	8.37
Blu 60 mm (6″×13″)		42.63	3.96
Blu Grande	60×495×825	118.49	11.01
Blu 45 mm see Overlay section		93	9.5
Borealis	2.25×5×30	124.64	11.58
	2.25×10×30	233.03	21.65
Borealis Stepping Stone	Variable		
Everest	250×250	179	16.63
	250×500	223	20.00
	500×500	336	31.00

SLABS	size	sq. ft	sq. m
Hexa 60 mm		101.2	9.40
Inca		108.3	10.06
Industria 600 series	600×600×60	204.13	18.96
Maya	Variable		
Ocean Grande		129.7	12.1
Pacific see Overlay section		246.0	22.90
Para	500x250	223	20
	500x500	336	31
	500x750	405	37
Travertina Raw	30×30	483	44.87
	30×20	388	36.05
	20×20	324	30.07
	20×10	216	20.08

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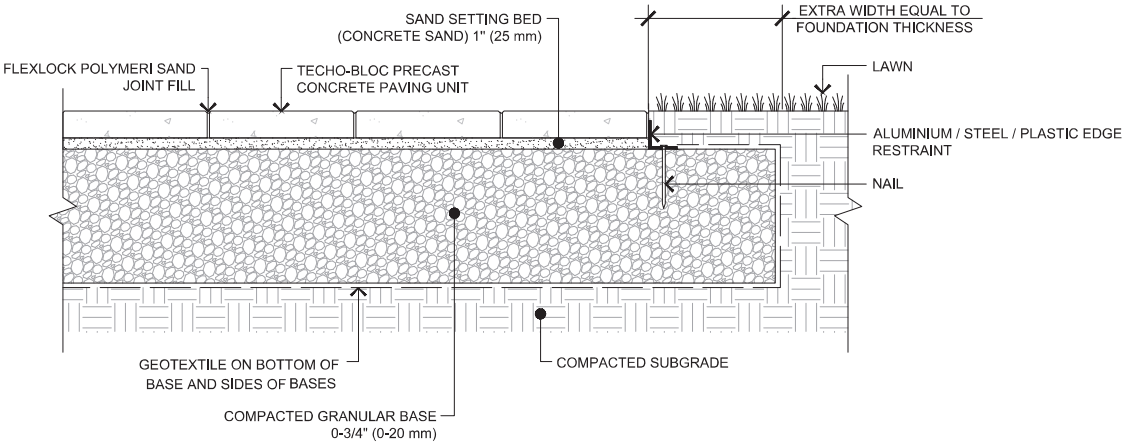
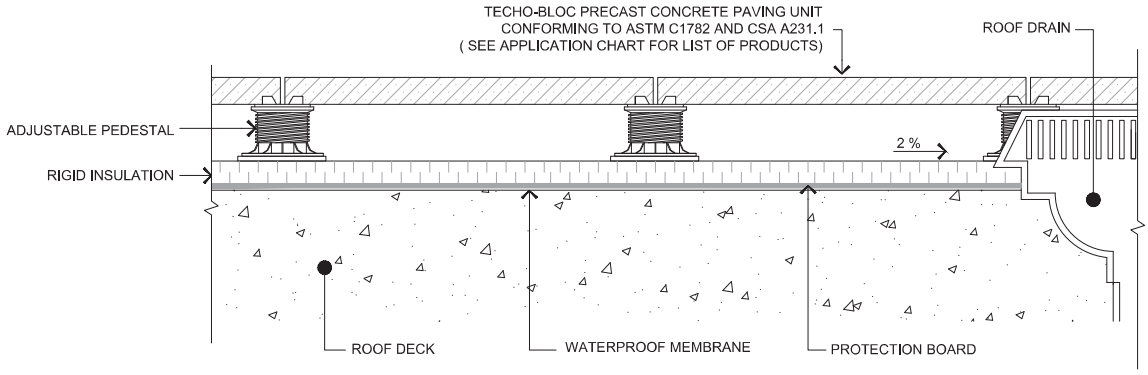
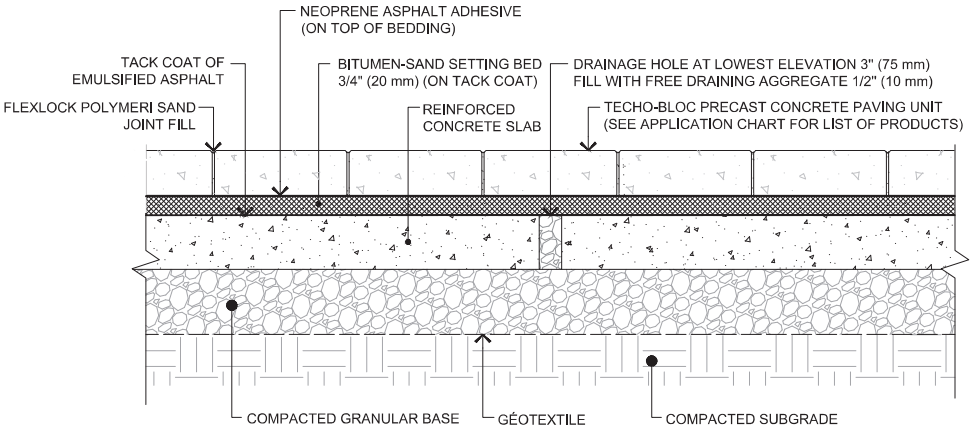
PAVING UNIT ON COMPACTED GRANULAR BASE



PAVING UNIT ON PEDESTAL SET



PAVING UNIT ON BITUMINOUS SAND-SET



PLEASE REFER TO P.4 FOR THE CORRECT USE AND LIMITATIONS OF PROVIDED TECHNICAL INFORMATION.

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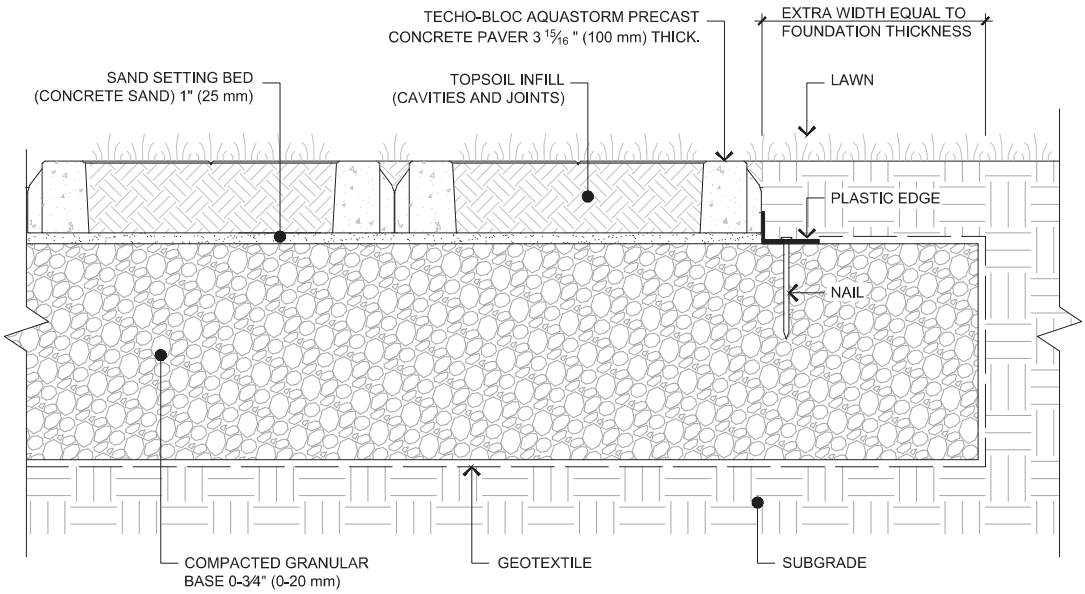
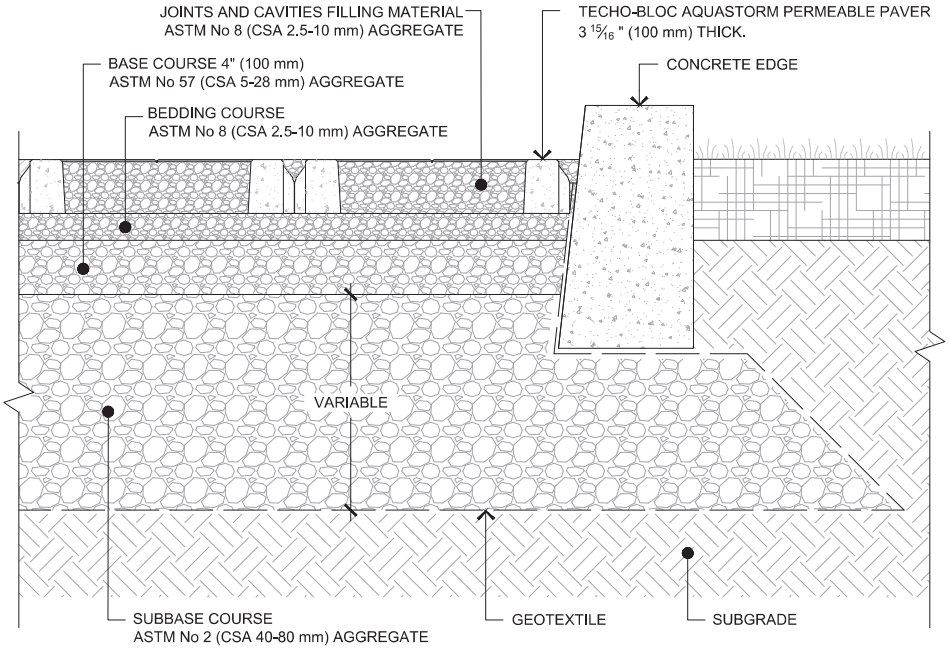
CONCRETE GRID PAVER - AQUASTORM (GRASS INFILL)



CONCRETE GRID PAVER - AQUASTORM (AGGREGATE INFILL)



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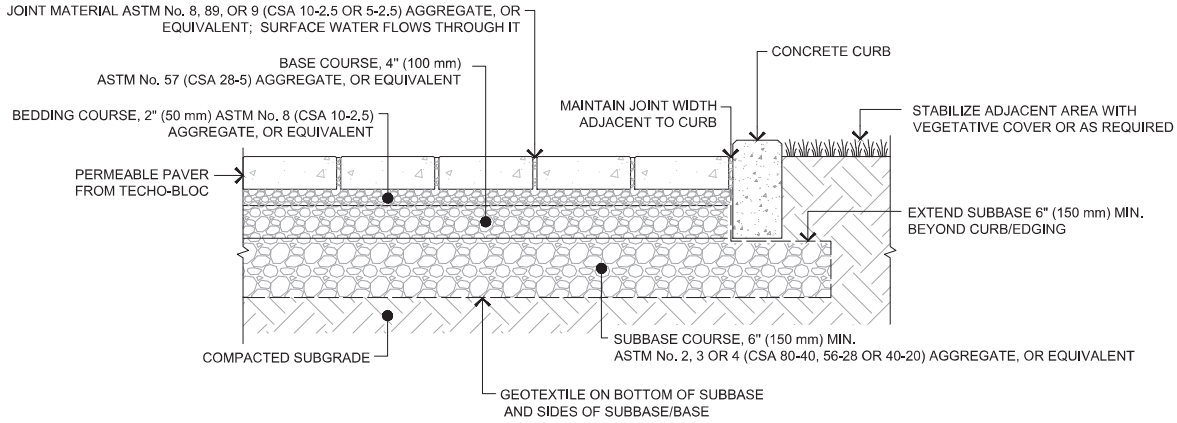
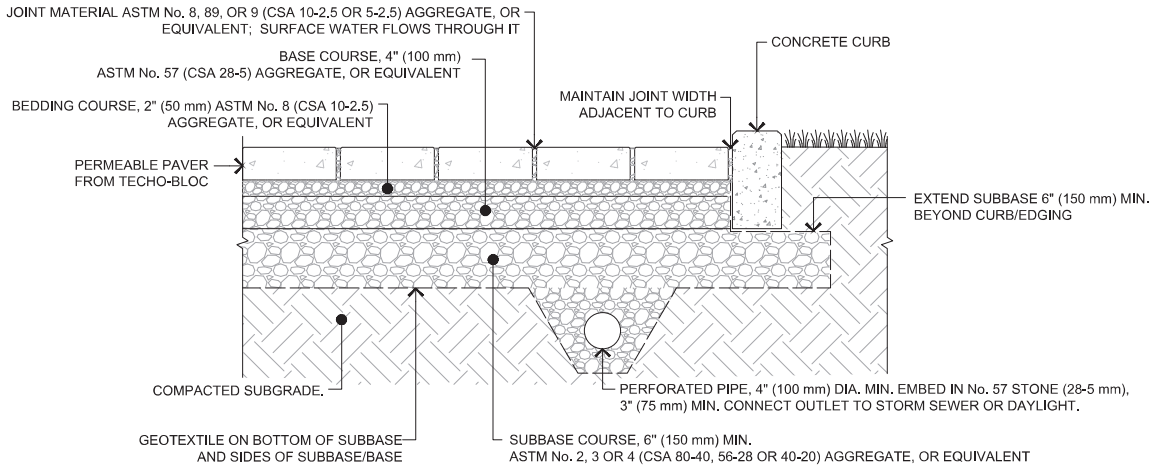
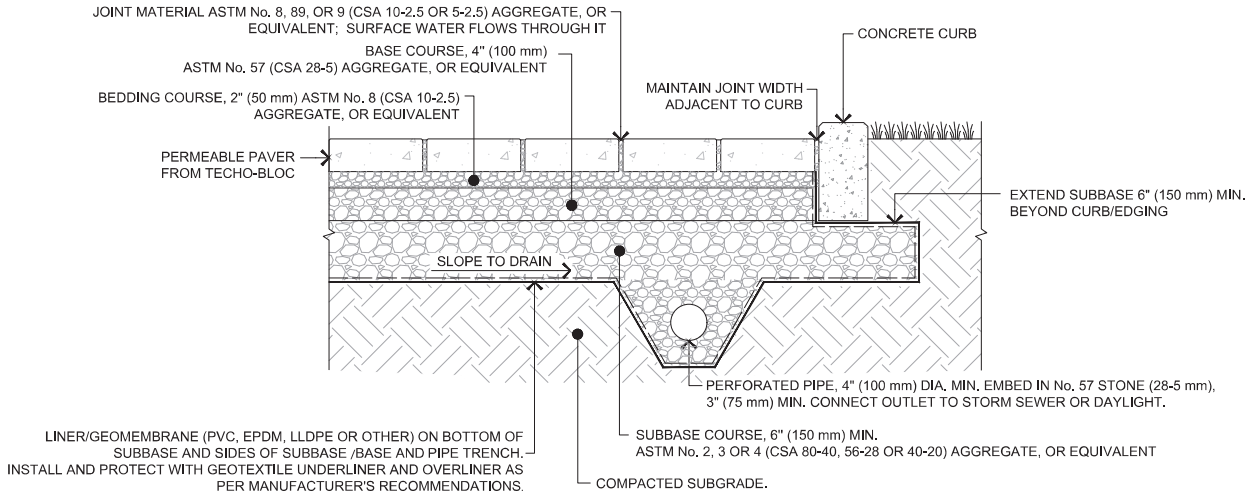
PERMEABLE PAVER - FULL INFILTRATION TO SOIL SUBGRADE



PERMEABLE PAVER - PARTIAL INFILTRATION TO SOIL SUBGRADE



PERMEABLE PAVER - NO INFILTRATION TO SOIL SUBGRADE

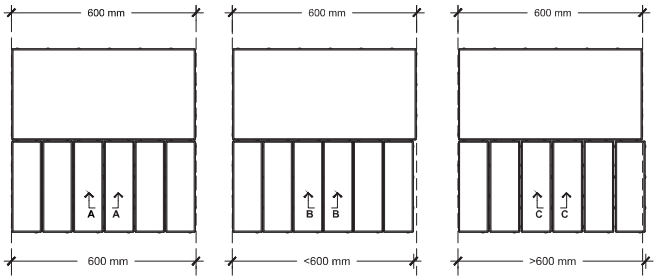


PLEASE REFER TO P.4 FOR THE CORRECT USE AND LIMITATIONS OF PROVIDED TECHNICAL INFORMATION.

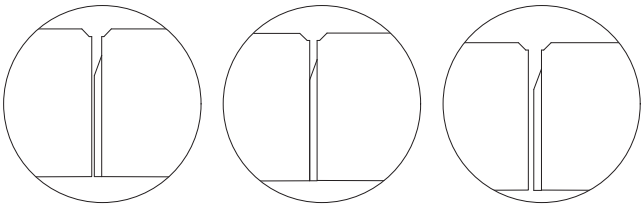
INSTALLATION ACCORDING TO NOMINAL DIMENSIONS

The nominal dimension of a paving unit (width or length) represents the absolute distance between the half-joint on one side of the paving unit and the half-joint on the opposite side. The paving units must be laid while respecting their nominal dimensions. Installed pavers must be neither too tight nor too loose to ensure the performance and integrity of the pavement in service.

Here is an example where pavers of nominal dimension 600x100 mm are laid next to 600x300 mm pavers. If the installation is done according to the nominal dimensions (mid-joint to mid-joint), then at each 600 mm the ends of the pavers will coincide. Otherwise, the installation will be considered tight or loose.



PROPER INSTALLATION | TIGHT INSTALLATION | LOOSE INSTALLATION



A-A | B-B | C-C

PAVING UNITS – JOINT WIDTH

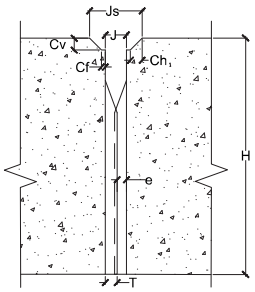
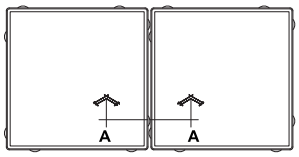
The space between the paving units (excluding the spacer), i.e. the joint width (J), will depend on the thickness of the spacer (T) and the free space (e) between the spacer and the edge side (or spacer) of the adjacent paving unit. To these dimensions are added the dimensions of the chamfer (Ch) and flat shoe (Cf) to determine the joint width on the surface (Js) of the segmental concrete pavement.

Note: The dimensions shown in this table can differ for paving units with slate texture or other type of embossed texture. SLEEK joint width will depend on the spacer position: (i) front to front (largest dimension) or (ii) staggered (smallest dimension).

							CHAMFER			SPACER	
	HEIGHT		NOMINAL JOINT WIDTH (J)		JOINT WIDTH ON THE SURFACE (JS)		FLAT SHOE	VERTICAL	HORIZONTAL	THICKNESS	FREE SPACE
PAVER	H		J1	J2	Js1	Js2	Cf	Cv	Ch	T	e
Aquastorm	100 mm	3 15/16 in.	41.0 mm	-	49.0 mm	-	1.0 mm	3.0 mm	3.0 mm	20.0 mm	1.0 mm
Blu 80 (6x13)	80 mm	3 1/8 in.	7.0 mm		15.0 mm	-	1.0 mm	3.0 mm	3.0 mm	3.0 mm	1.0 mm
Hexa 100 mm	100 mm	3 15/16 in.	2.5 mm	-	7.5 mm		1.0 mm	1.5 mm	1.5 mm	1.5 mm	1.0 mm
Industria	100 mm	3 15/16 in.	3.0 mm	-	11.0 mm	-	1.0 mm	3.0 mm	3.0 mm	2.0 mm	1.0 mm
Linea	100 mm	3 15/16 in.	3.0 mm	-	11.0 mm	-	1.0 mm	3.0 mm	3.0 mm	2.0 mm	1.0 mm
Diamond	100 mm	3 15/16 in.	2.5 mm	-	7.5 mm	-	1.0 mm	1.5 mm	1.5 mm	1.5 mm	1.0 mm
Sleek	90 mm	3 9/16 in.	4.0 mm	2.5 mm	12.0 mm	10.5 mm	1.0 mm	3.0 mm	3.0 mm	1.5 mm	1.0 mm
Westmount	80 mm	3 1/8 in.	3.0 mm		43.0 mm		0.0 mm	1.0 mm	20.0 mm	2.0 mm	1.0 mm
Hydra	100 mm	3 15/16 in.	13.0 mm	-	19.0 mm	-	1.0 mm	3.0 mm	3.0 mm	12.0 mm	1.0 mm
Pure	80 mm	3 1/8 in.	10.0 mm	-	Variable		Variable	7.0 mm	Variable	9.0 mm	1.0 mm

LEGEND

H	HEIGHT
Js	JOINT WIDTH ON THE SURFACE
J	JOINT WIDTH BETWEEN TWO PAVERS (excluding spacers)
Cf	FLAT SHOE CHAMFER
Cv	CHAMFER VERTICAL RISE
Ch	CHAMFER HORIZONTAL DISTANCE
T	THICKNESS OF SPACERS
e	FREE SPACE BETWEEN THE PAVER'S SPACER AND ADJACENT PAVER



Typical Paver Joint