





A new landmark in the ceramic industry

Landmark Ceramics is an American company, based in Tennessee that has set out to research, manufacture and sell top quality porcelain ceramics in North America, taking advantage of the proven experience of the Gruppo Concorde, an international leader in the sector. Technological innovation, market presence, attention to detail, the welfare of people and the environment, efficient service and a thorough product range make Landmark a new benchmark in the North American market for those who are looking for a reliable partner for any building and architecture project using US made top quality porcelain tiles.

LAYING PATTERNS BOOK

Landmark "Laying Patterns Book" is a collection of installation solutions, from the most original and refined to the most classic, designed to help you choose the layout patterns for your spaces whether they use a single format or a combination of different sizes. The patterns are proposed both for tiles of traditional thickness and for the 3/4" - 20mm slabs of the Frontier20 range, meeting all your needs for indoor and outdoor applications.









1

LAYING PATTERNS FOR

LANDMARK & LANDMARK CONTRACT COLLECTIONS

1.1	12"x24"	p. 7 p. 10 p. 12 p. 15 p. 18 p. 22
1.2	24"x24" - 12"x24"	p. 29 p. 30 p. 30 p. 31
1.3	24"x24" - 12"x24" - 18"x36"	p. 33 p. 34 p. 35 p. 36

2

LAYING PATTERNS FOR

FRONTIER20 COLLECTION

2.1	24"x48"_ 16"x48"_	p. 4 p. 4
	12"x48"	p. 4
	24"x24" 18"x36"	p. 5 p. 5
	12"x24"	p. 5
	12"x12"	p. 5

M.P.D. SMALL 20 mm

22	12"x24" - 12"x12"	p.	61
 _	24"x24" - 12"x24" - 12"x12"	p.	64

M.P.D. BIG 20 mm

2 3	24"x48" - 24"x24" - 24"x36"- 12"x24"	p. 6
2.5	24"x48" - 24"x24" - 24"x36"- 12"x24" 24"x48" - 24"x24" - 12"x12"	p. 7
	24" \(\lambda \)	n 7

3

PORCELAIN TILE PERFORMANCE DATA

9 mm	p. 7
20 mm	p. 7

LAYING & CLEANING INFORMATION

aying suggestions	p.	80
nal floor cleaning	n	82



LAYING PATTERNS FOR

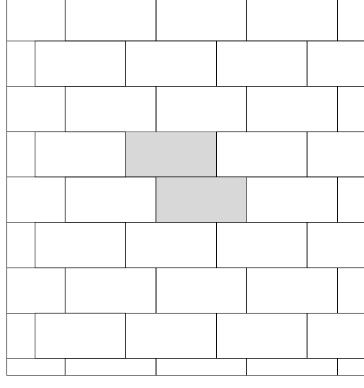
LANDMARK AND LANDMARK CONTRACT COLLECTIONS



In this chapter you will find all the **single-size** laying patterns that can be created with 9mm Landmark Products.

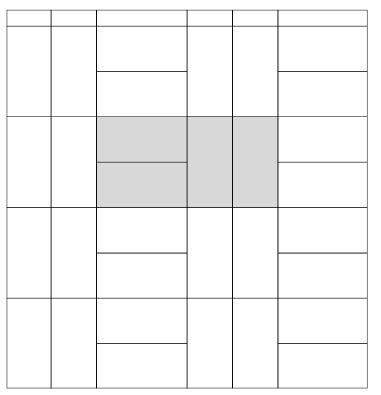


LAYING 12"x24" ONE



Module percentage
12"x24"= 100%

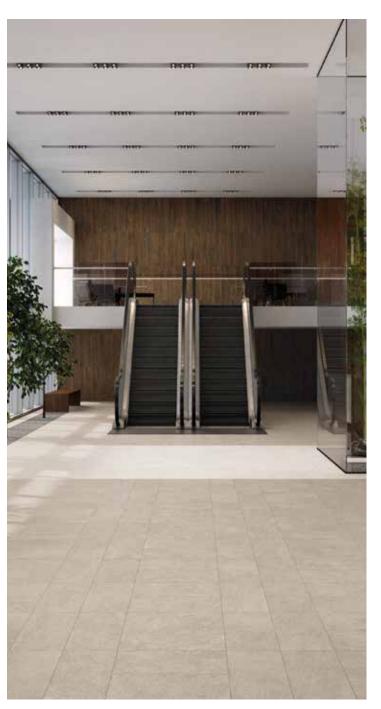
LAYING **12"x24"** TWO



Module percentage

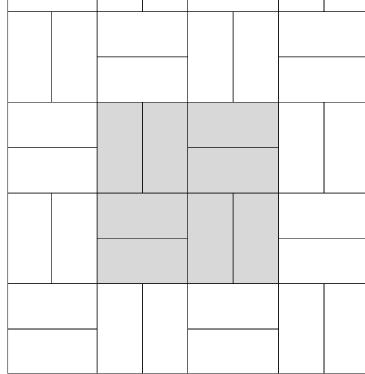
12"x24"= **100%**

Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8")





LAYING **12"x24"** THREE

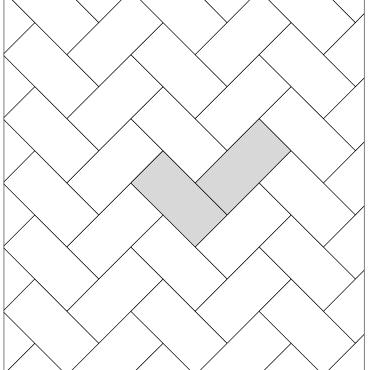


Module percentage

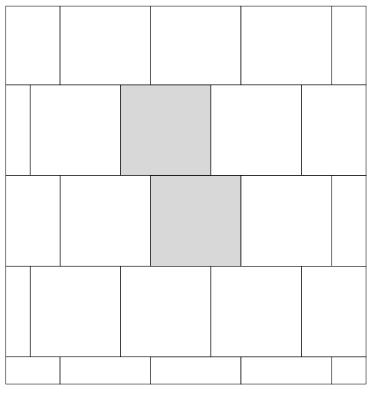
12"x24"= **100%**

Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8")

LAYING **12"x24"** FOUR



LAYING **24"x24"** ONE





Module percentage

12"x24"= **100%**



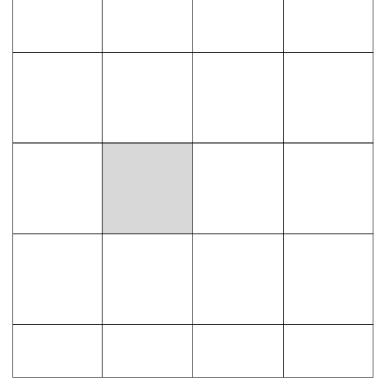
Module percentage

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").



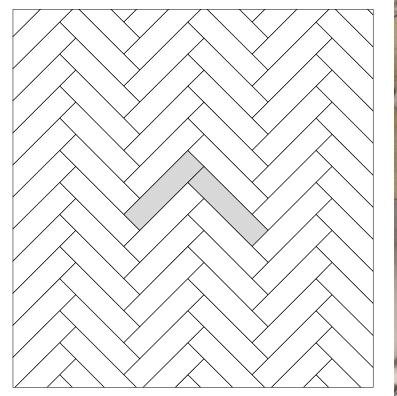
LAYING 24"x24" TWO

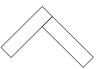


Module percentage

24"x24" = **100%**

LAYING **6"x24"** ONE





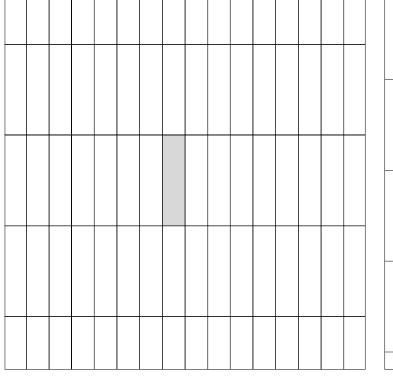
Module percentage

6"x24" = **100%**

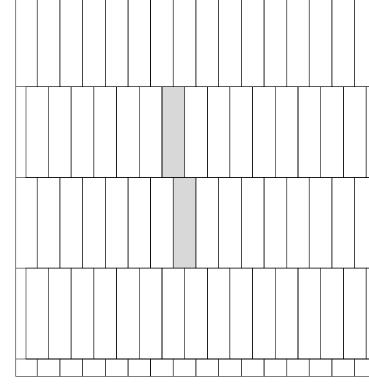
Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").



LAYING **6"x24"** TWO



LAYING **6"x24"** THREE



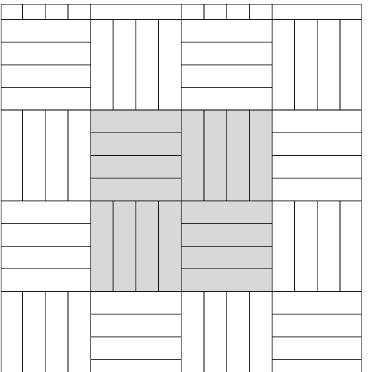
6"x24" = **100%**

Module percentage

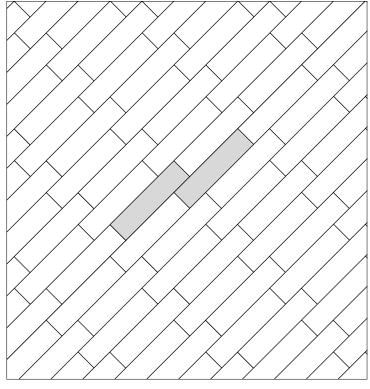
Module percentage 6"x24" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

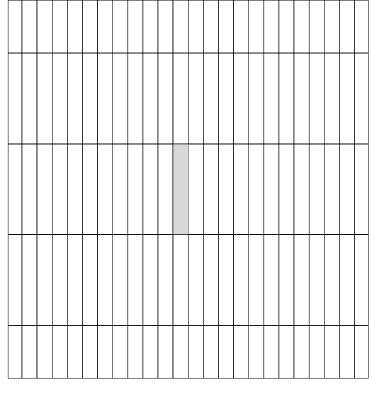
LAYING **6"x24"** FOUR



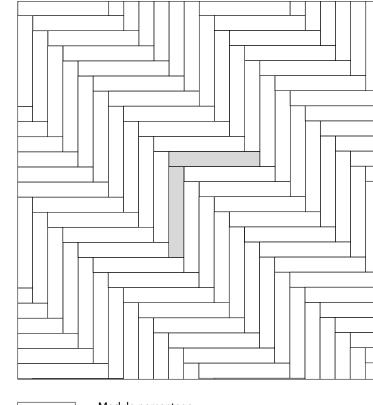
LAYING **6"x24"** FIVE

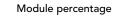


LAYING 4"x24" ONE



LAYING **4"x24"** TWO







Module percentage

Module percentage

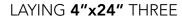


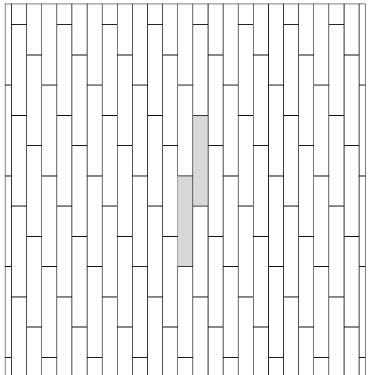
4"×24" = **100%**

Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8").

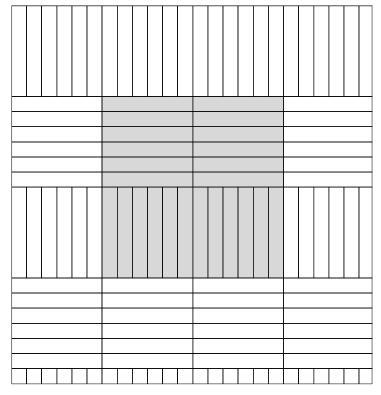
Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").



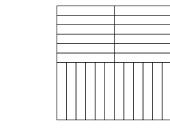


LAYING **4"x24"** FOUR



Module percentage

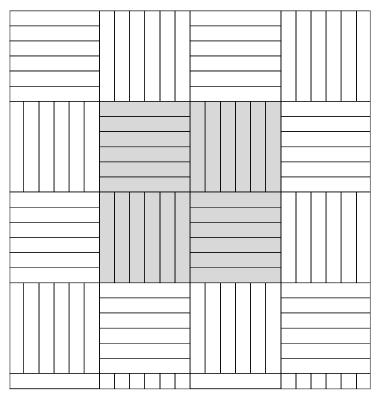




Module percentage

Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8")

LAYING 4"x24" FIVE



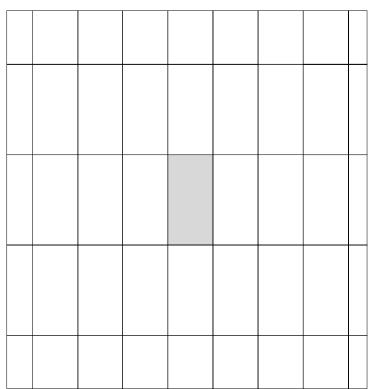
Module percentage



Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8").

Note: installation possible with both rectified and not rectified material.

LAYING 18"x36" ONE



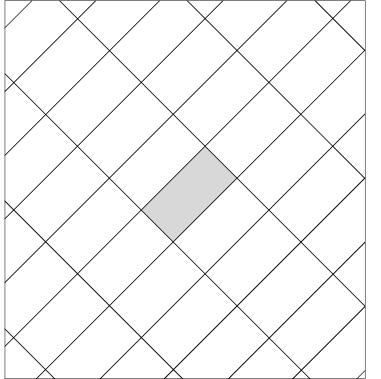
Module percentage

18"x36" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").



LAYING **18"x36"** TWO

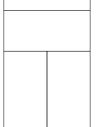


Module percentage 18"x36" = **100%**

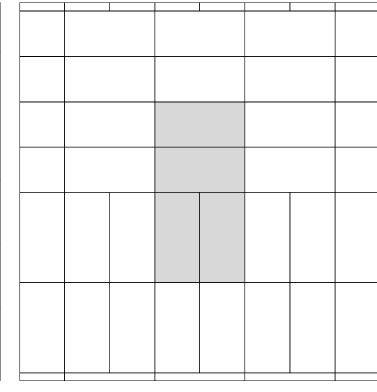
Note: installation possible with both rectified and not rectified material.

We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").





LAYING **18"x36"** THREE



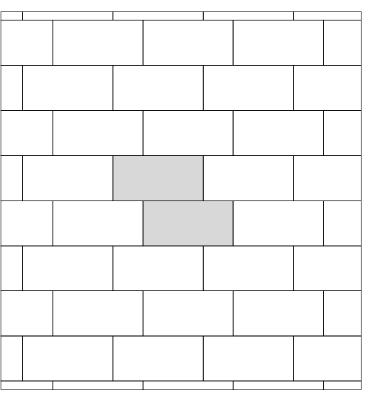
18"x36" = **100%**



Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8")

Module percentage

LAYING **18"x36"** FOUR

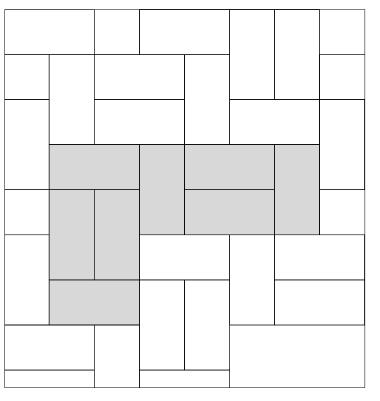


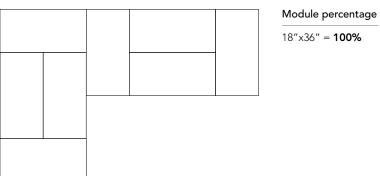
Module percentage 18"x36" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").



LAYING **18"x36"** FIVE

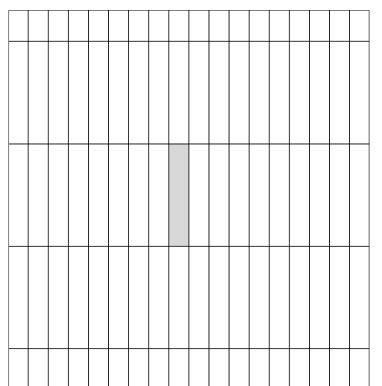




18"x36" = **100%**

Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8").

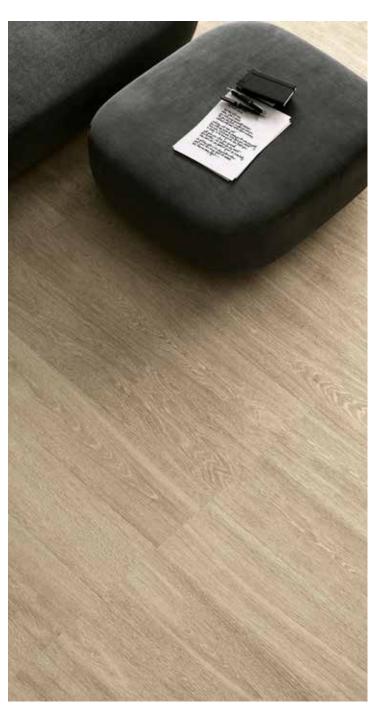
LAYING 8"x40" ONE

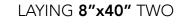


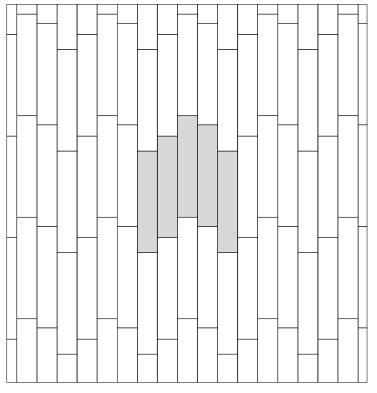
Module percentage

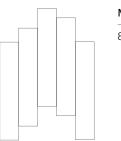
8"x40" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").







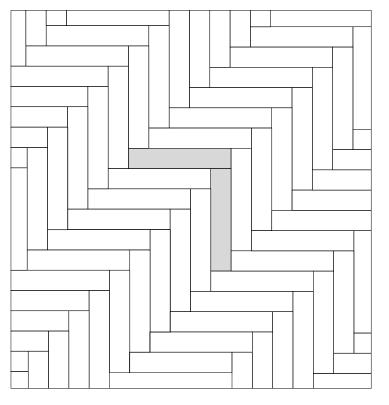


Module percentage

8"x40" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

LAYING 8"x40" THREE



Module percentage

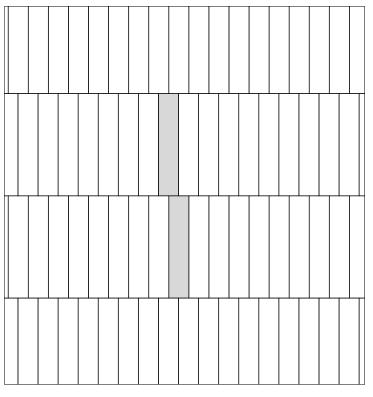
8"x40" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").





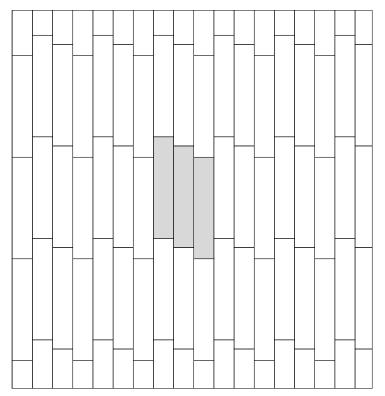
LAYING 8"x40" FOUR



Module percentage

8"x40" = **100%**

LAYING 8"x40" FIVE

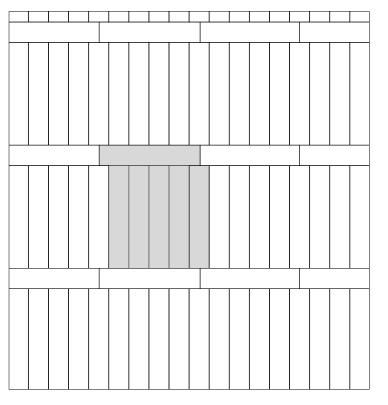


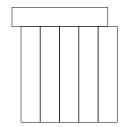
Module percentage
8"x40" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").



LAYING 8"x40" SIX





Module percentage

8"x40" = **100%**

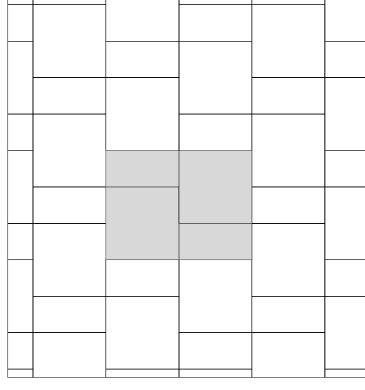
Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").



In this chapter you will find all the **two-sizes** laying patterns that can be created with 9mm Landmark Products.



LAYING **24"x24"- 12"x24"**

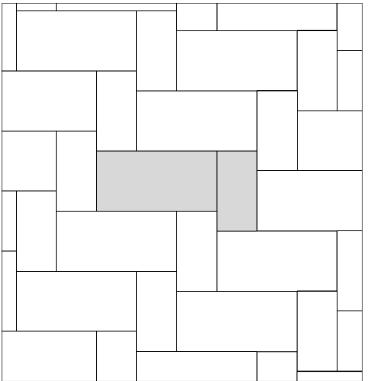


Module percentage

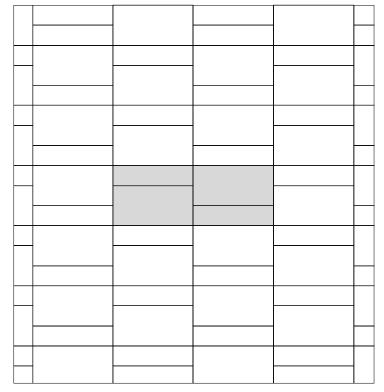
24"x24" = **66.7%** 12"x24" = **33.3%**



LAYING **12"x24"- 18"x36"**



LAYING **6"x24"- 12"x24"**

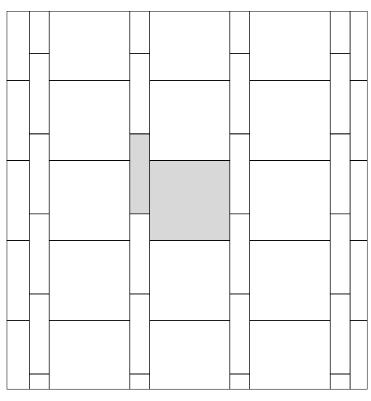


Module percentage

12"x24" = **30.8%** 18"x36" = **69.2%**

Module percentage

6"x24" = **33.3%** 12"x24" = **66.7%** LAYING **6"x24"- 24"x24"**



Module percentage

6"x24" = **20%** 24"x24" = **80%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").



In this chapter you will find all the **three-sizes** laying patterns that can be created with 9mm Landmark Products.

LAYING **24"x24"- 12"x24" - 18"x36"** ONE LAYING **24"x24"- 12"x24" - 6"x24"** ONE Module percentage Module percentage 24"x24" = **38%** 24"x24" = **57%** 12"x24" = **19%**

Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8").

18"x36" = **43%**

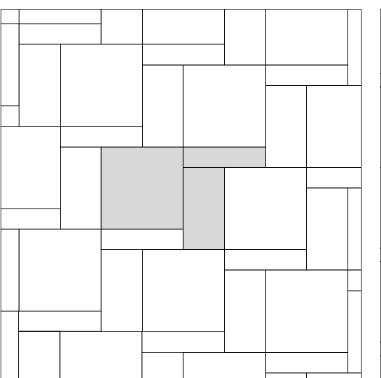
Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

12"x24" = **29%**

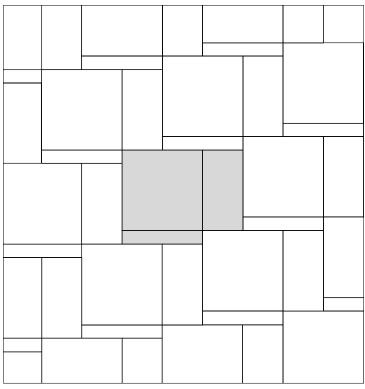
6"x24" = **14%**



LAYING **24"x24"- 12"x24" - 6"x24"** TWO



LAYING 24"x24" - 12"x24" - 4"x24" ONE

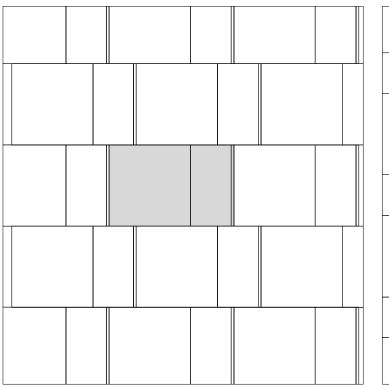


Module percentage

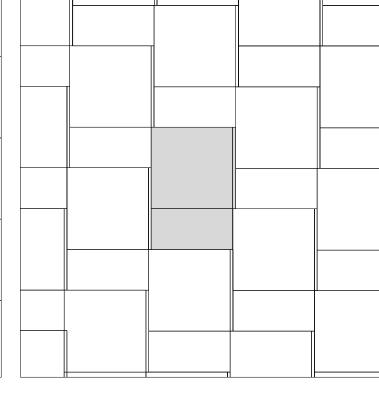
24"x24" = **57%** 12"x24" = **29%** 6"x24" = **14%**

Module percentage

24"x24" = **60%** 12"x24" = **30%** 4"x24" = **10%** LAYING **24"x24"- 12"x24" - 0.8"x24"** ONE



LAYING **24"x24"- 12"x24" - 0.8"x24"** TWO



Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

Module percentage

0.8"x24" = **2%**

24"x24" = **65%**

12"x24" = **33%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 2-3mm (approx 5/64" - 1/8").

Module percentage

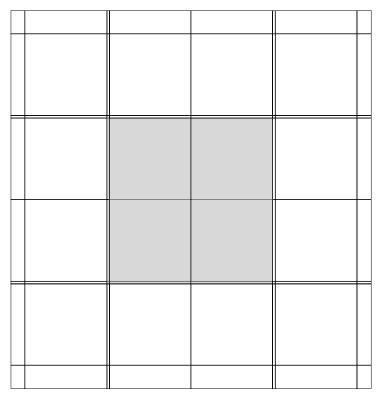
0.8"x24" = **2%**

24"x24" = **65%**

12"x24" = **33%**



LAYING **24"x24" - 0.8"x24" - 0.8"x0.8"** ONE

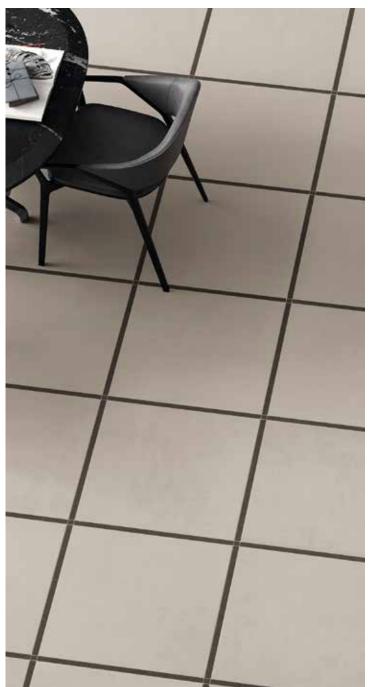


Module percentage

0.8"x0.8" = **0.1%** 0.8"x24" = **6.2%** 24"x24" = **93.7%**

Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8").





LAYING **24"x24" - 0.8"x24" - 0.8"x0.8"** TWO

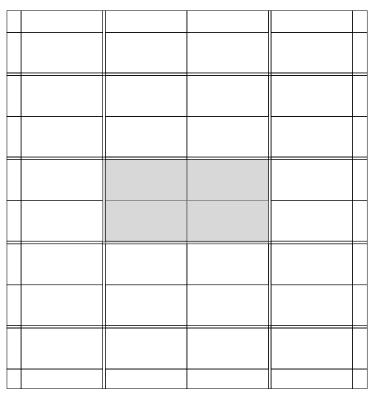
Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8").

 $\frac{\text{Module percentage}}{0.8" \times 0.8"} = \textbf{0.1\%}$

0.8"x24" = **6.2%**

24"x24" = **93.7%**

LAYING **12"x24" - 0.8"x24" - 0.8"x0.8"** ONE



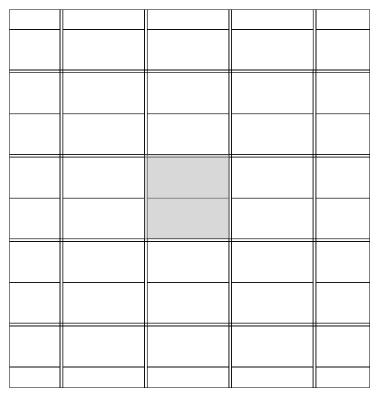
Module percentage

0.8"x0.8" = **0,3%** 0.8"x24" = **6.2%** 12"x24" = **93.5%**

Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8").



LAYING 12"x24" - 0.8"x24" - 0.8"x0.8" TWO

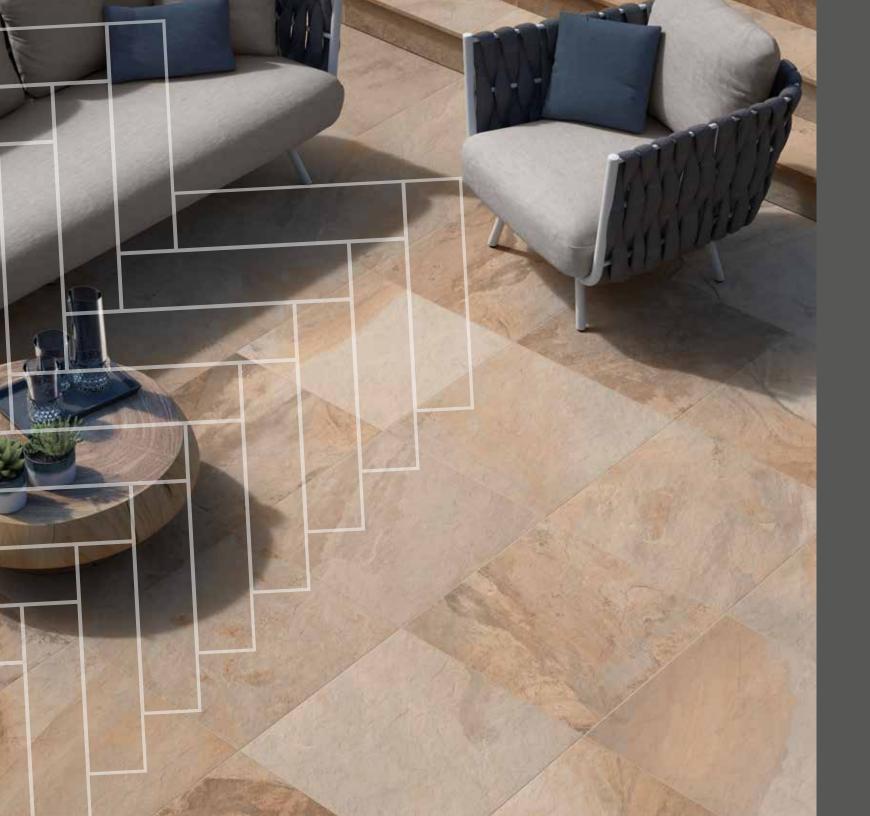


Module percentage

0.8"x0.8" = **0.1%** 0.8"x24" = **11.9%**

12"x24" = **88%**

Note: installation possible with rectified material with joint of 2mm (approx 5/64"). Installation possible with not rectified material with joint of 2-3mm (approx 5/64" - 1/8").





LAYING PATTERNS FOR

FRONTIER20 COLLECTION

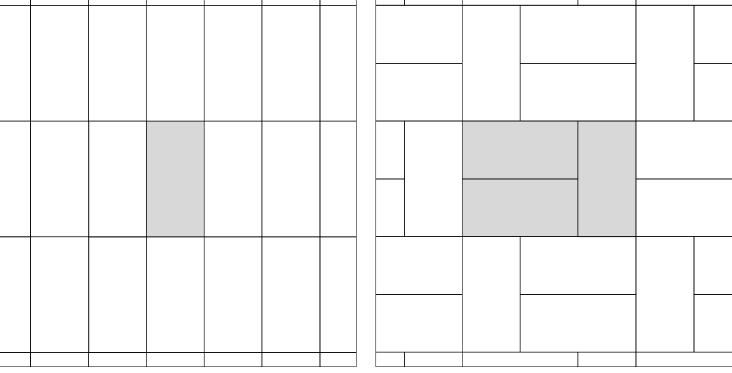


In this chapter you will find all the **single-size** laying patterns that can be created with 20mm Landmark Products.

LAYING PATTERNS 20 mm

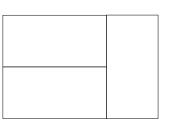
LAYING **24"x48"** ONE

LAYING **24"x48"** TWO



Module per	
24"x48" = 1	

100%



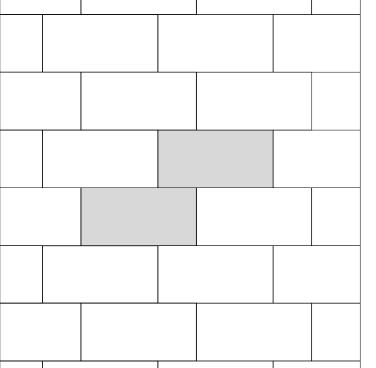
Module percentage 24"x48" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

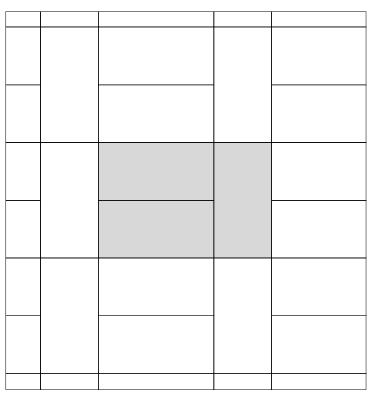
Note: installation possible with rectified material with joint of 4mm (approx 5/32"). Installation possible with not rectified material with joint of 4mm (approx 5/32").



LAYING **24"x48"** THREE



LAYING **24"x48"** FOUR



Module percentage

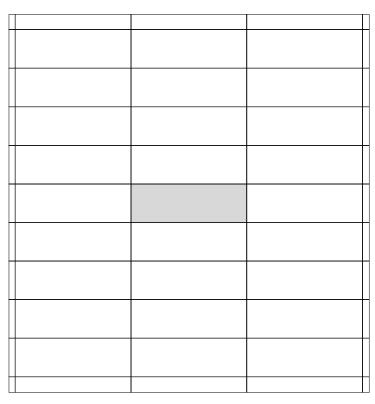
24"x48" = 100%

 $\frac{\text{Module percentage}}{24'' \times 48'' = 100\%}$

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

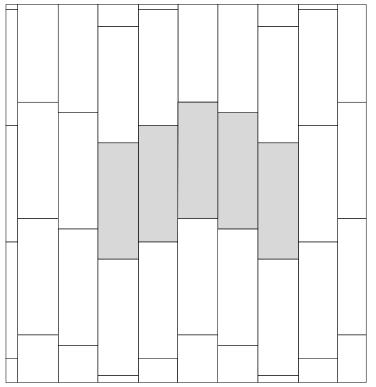
Note: installation possible with rectified material with joint of 4mm (approx 5/32"). Installation possible with not rectified material with joint of 4mm (approx 5/32").

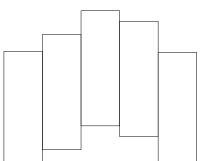
LAYING 16"x48" ONE



Module percentage
16"x48" = **100%**

LAYING **16"x48"** TWO





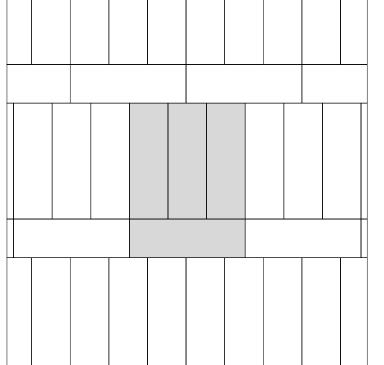
Module percentage

16"x48" = **100%**

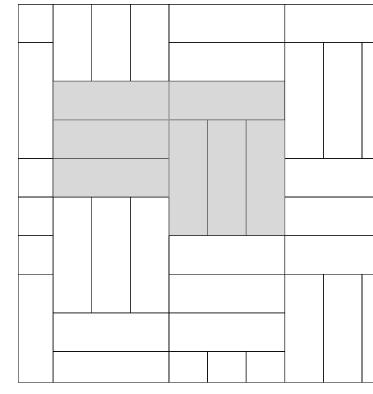
Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").



LAYING **16"x48"** THREE



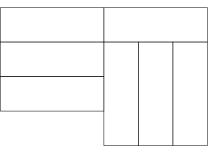
LAYING **16"x48"** FOUR





Module percentage

16"x48" = **100%**

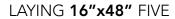


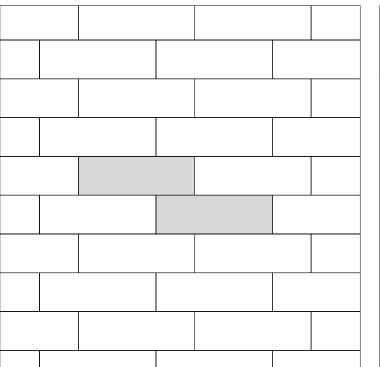
Module percentage

16"x48" = **100%**

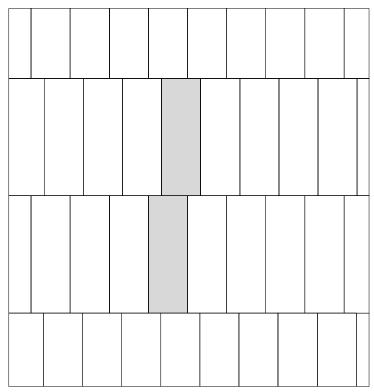
Note: installation possible with rectified material with joint of 4mm (approx 5/32"). Installation possible with not rectified material with joint of 4mm (approx 5/32").



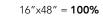




LAYING 16"x48" SIX



Module percentage

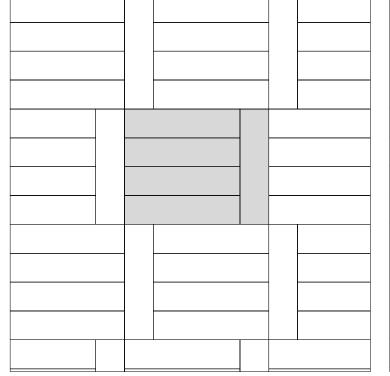


Module percentage

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

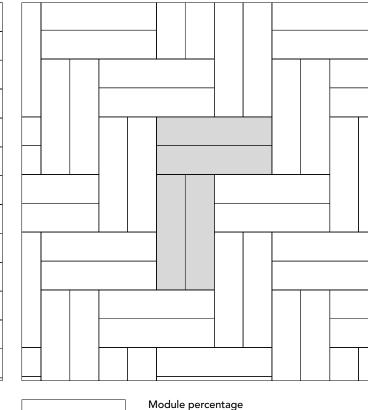
LAYING **12"x48"** ONE



Module percentage

12"x48" = **100%**

LAYING 12"x48" TWO

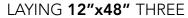


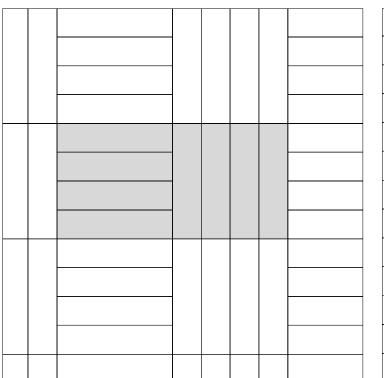
Note: installation possible with rectified material with joint of 4mm (approx 5/32"). Installation possible with not rectified material with joint of 4mm (approx 5/32").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

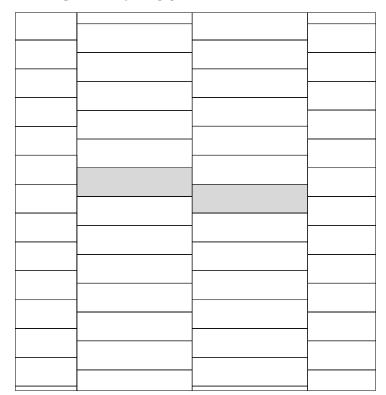
12"x48" = **100%**

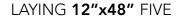


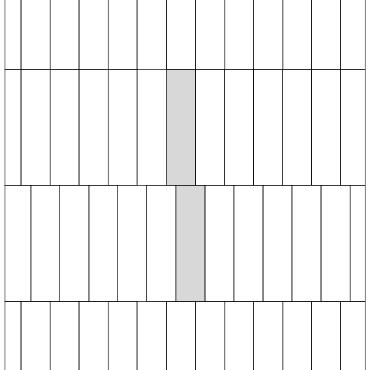




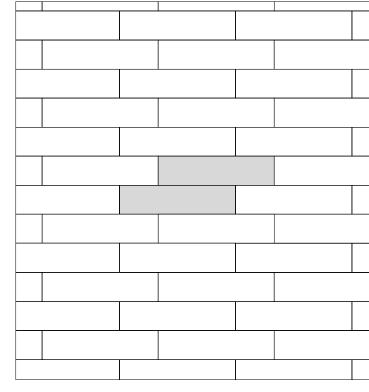
LAYING **12"x48"** FOUR

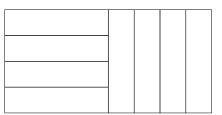


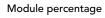




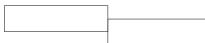
LAYING **12"x48"** SIX







12"x48" = **100%**



Module percentage

12"x48" = **100%**

Module percentage



Module percentage

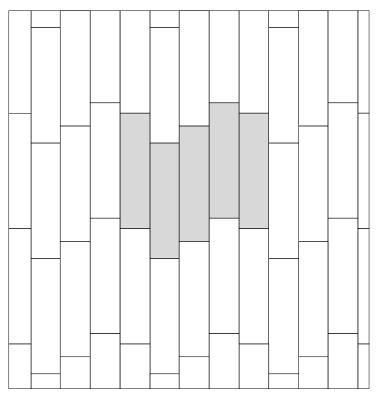
12"x48" = **100%**

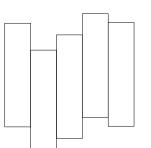
Note: installation possible with rectified material with joint of 4mm (approx 5/32"). Installation possible with not rectified material with joint of 4mm (approx 5/32")

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

LAYING **12"x48"** SEVEN



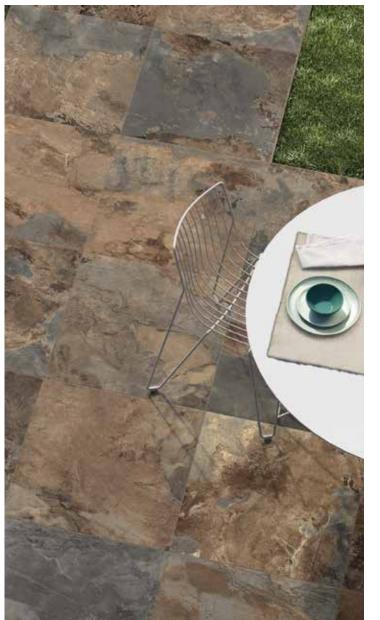


Module percentage

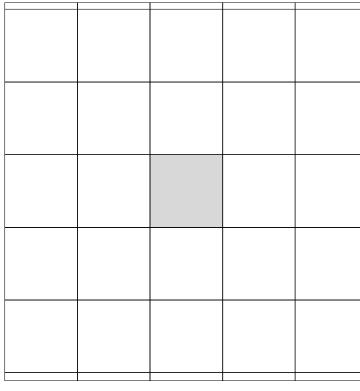
12"x48" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").





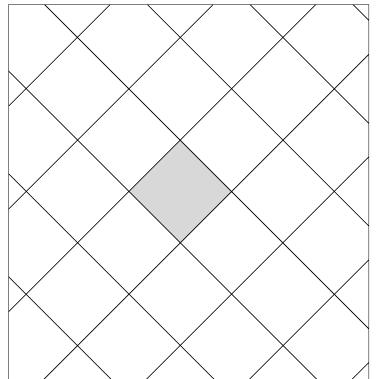
LAYING **24"x24"** ONE



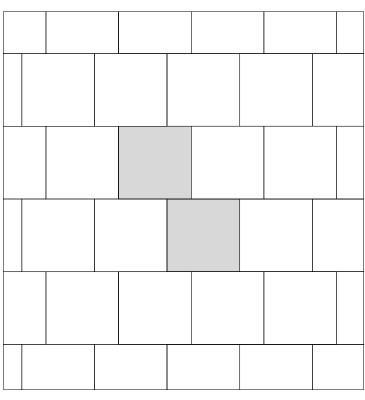
Module percentage 24"x24" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

LAYING **24"x24"** TWO

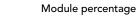


LAYING **24"x24"** THREE



Module percentage

24"x24" = **100%**



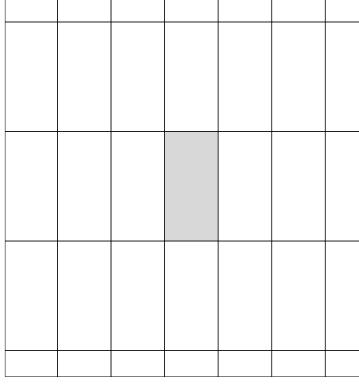
24"x24" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").



LAYING 18"x36" ONE

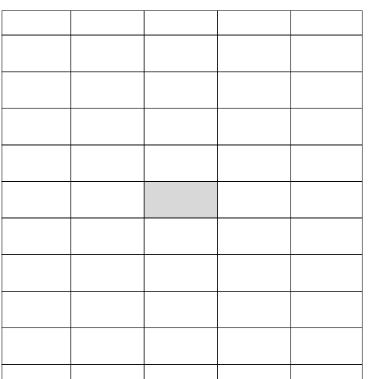


Module percentage

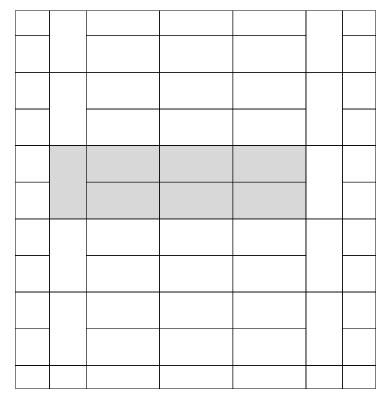
18"x36" = **100%**

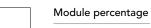


LAYING **12"x24"** ONE



LAYING **12"x24"** TWO

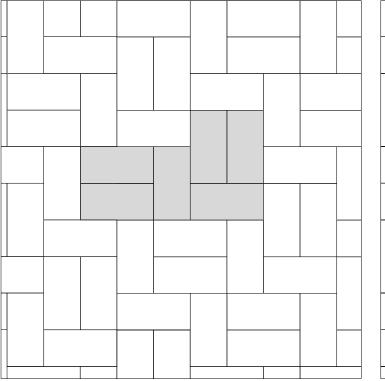




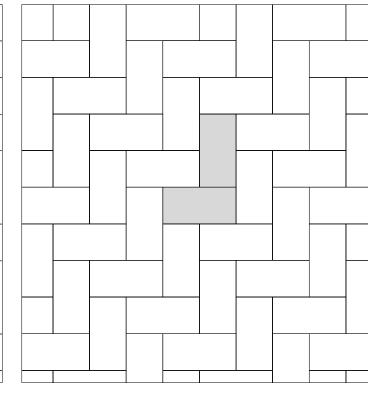


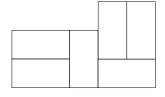
Module percentage

LAYING **12"x24"** THREE



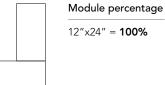
LAYING **12"x24"** FOUR





12"x24" = **100%**

Module percentage



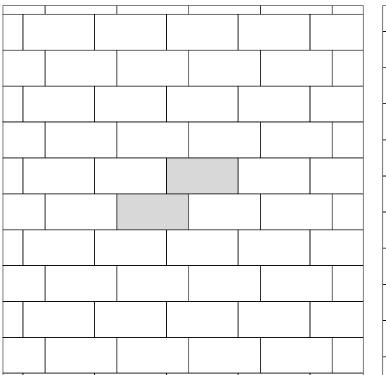
12"x24" = **100%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

Note: installation possible with rectified material with joint of 4mm (approx 5/32"). Installation possible with not rectified material with joint of 4mm (approx 5/32").

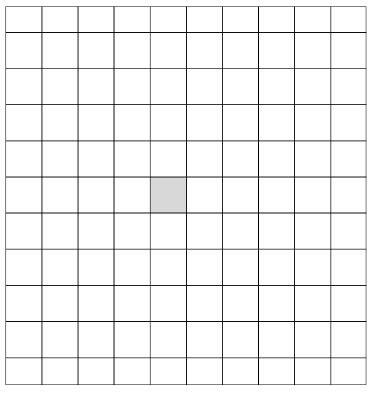
Note: installation possible with rectified material with joint of 4mm (approx 5/32"). Installation possible with not rectified material with joint of 4mm (approx 5/32").

LAYING **12"x24"** FIVE



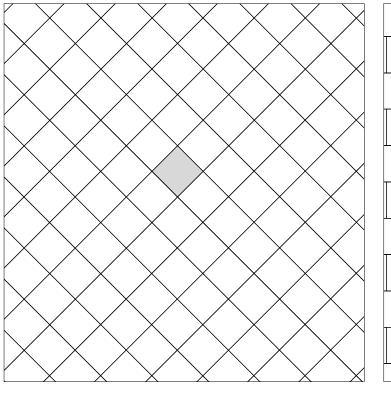
Module percentage
12"x24" = **100%**

LAYING 12"x12" ONE



Module percentage
12"x12" = **100%**

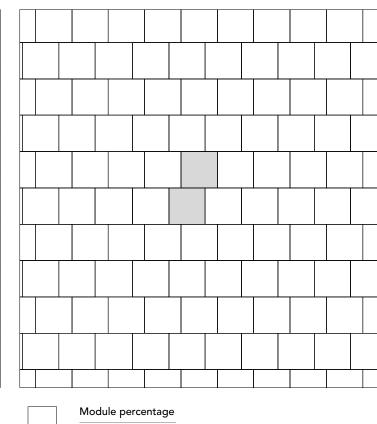
LAYING 12"x12" TWO



 $\frac{\text{Module percentage}}{12'' \times 12'' = 100\%}$

LAYING **12"x12"** THREE

12"x12" = **100%**



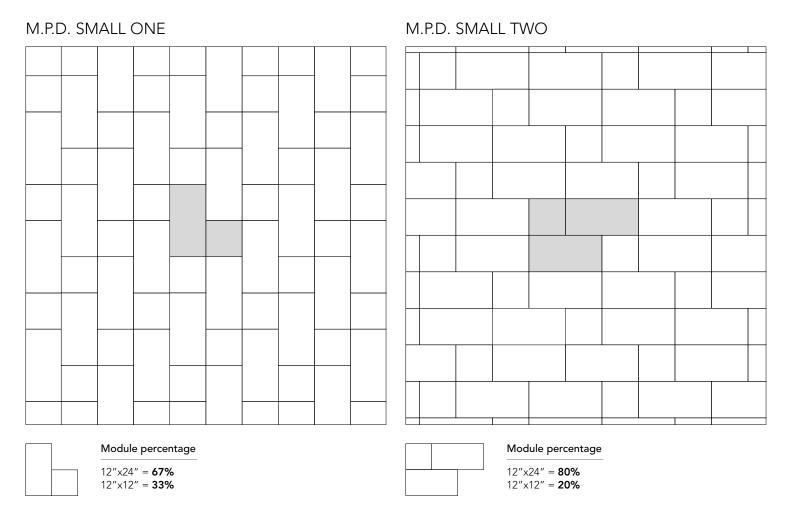
Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").



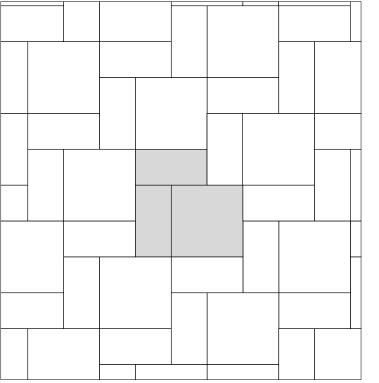
In this chapter you will find all the laying patterns **M.P.D. SMALL** that can be created with Landmark products with a thickness of 20mm.



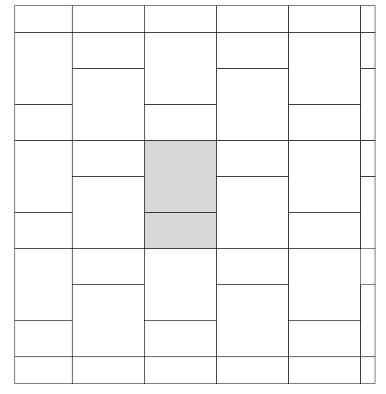
Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").







M.P.D. SMALL FOUR

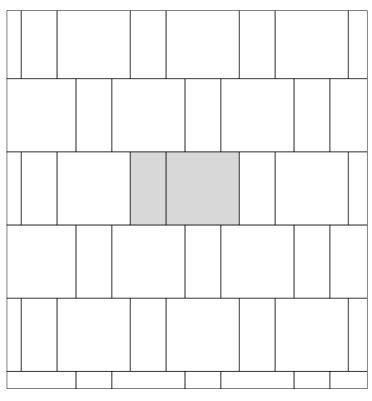


24"x24" = **67%** 12"x24" = **33%**

Module percentage

_

M.P.D. SMALL FIVE



Module percentage

12"x24" = **33.5%** 24"x24" = **66.5%**

Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").

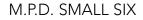
Module percentage

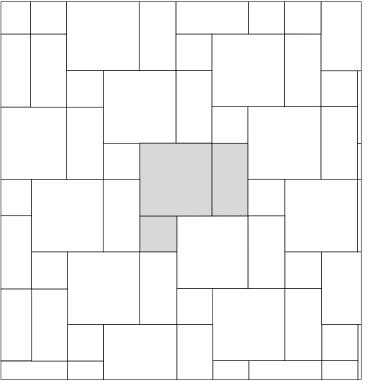
24"x24" = **50%**

12"x24" = **50%**

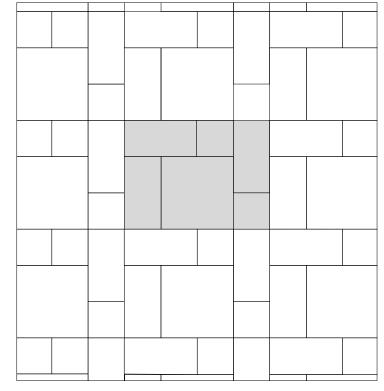
Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").



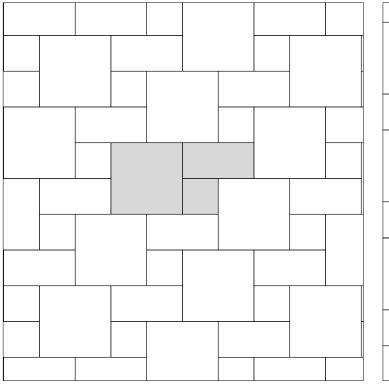




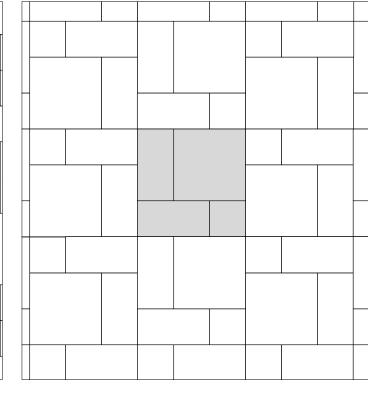
M.P.D. SMALL SEVEN



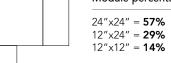
M.P.D. SMALL EIGHT

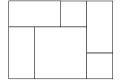


M.P.D. SMALL NINE



Module percentage

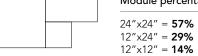




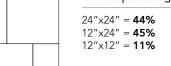
Module percentage

24"x24" = 33%	
12"x24" = 50%	
12"x12" = 17%	

Module percentage



Module percentage



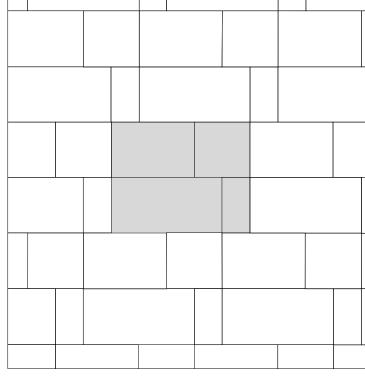
Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32"). Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32"). Note: installation possible with both rectified and not rectified material. We recommend a minimum joint of 4mm (approx 5/32").



In this chapter you will find all the laying patterns **M.P.D. BIG** that can be created with Landmark products with a thickness of 20 mm.



M.P.D. BIG ONE



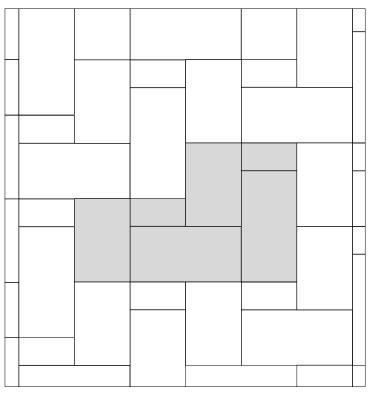
Module percentage

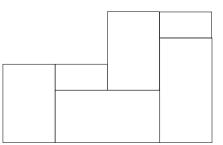
24"x48" = **40%** 24"x24" = **20%** 24"x36"+ 12"x24" (MIX) = **40%** **

Note: installation possible with rectified material. Modular with 4mm (approx 5/32").

The 24"x36" and 12"x24" sizes (MIX) are palletized together on the same single pallet containing the correct percentages of each size.

M.P.D. BIG TWO





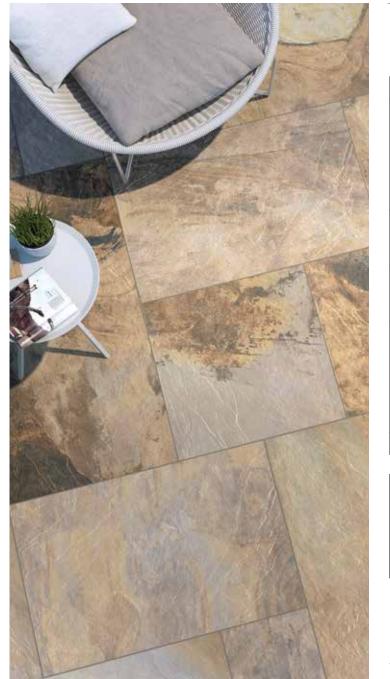
Module percentage

24"x48" = **50%** 24"x24" = **0%** 24"x36"+ 12"x24" (MIX) = **50%** **

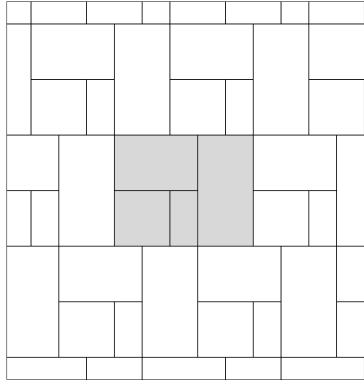
Note: installation possible with rectified material. Modular with 4mm (approx 5/32").

The 24"x36" and 12"x24" sizes (MIX) are palletized together on the same single pallet containing the correct percentages of each size.





M.P.D. BIG THREE





Module percentage

24"x48" = **40%**

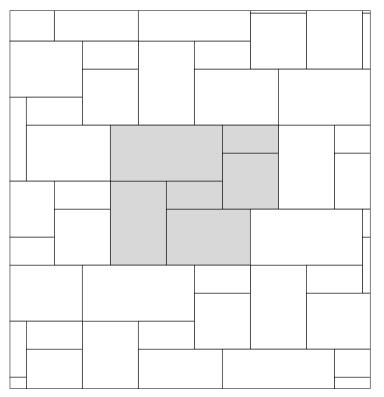
24"x24" = **20%** 24"x36" + 12"x24" (MIX) = **40%** **

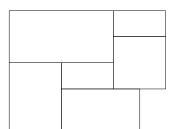
Note: installation possible with rectified material. Modular with 4mm (approx 5/32").

The 24"x36" and 12"x24" sizes (MIX) are palletized together on the same single pallet containing the correct percentages of each size.

NAME OF THE PARK

M.P.D. BIG FOUR





Module percentage

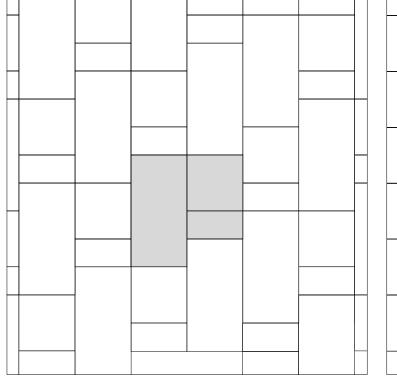
24"x48" = **28.6%** 24"x24" = **14.3%** 24"x36"+ 12"x24" (MIX) = **57.1%** **

Note: installation possible with rectified material. Modular with 4mm (approx 5/32").

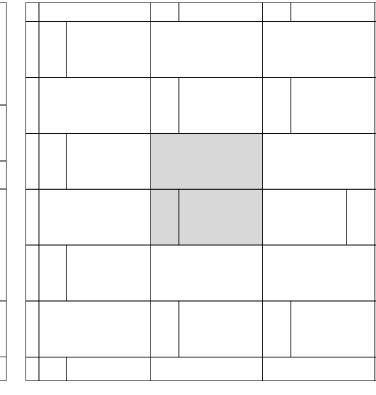
The 24"x36" and 12"x24" sizes (MIX) are palletized together on the same single pallet containing the correct percentages of each size.

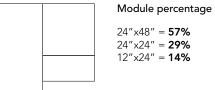


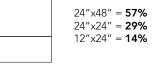
M.P.D. BIG FIVE

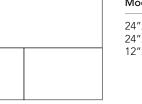


M.P.D. BIG SIX









Module percentage
24"x48" = 50%
24"x36" = 37.5%
12"x24" = 12.5%

Note: installation possible with rectified material. Modular with 4mm (approx 5/32").

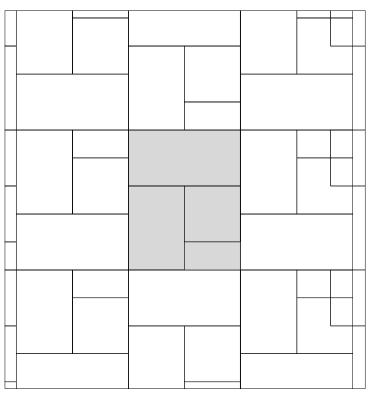
The 24"x36" and 12"x24" sizes (MIX) are palletized together on the same single pallet containing the correct percentages of each size.

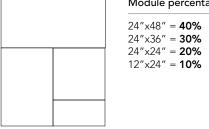
Note: installation possible with rectified material. Modular with 4mm (approx 5/32").

The 24"x36" and 12"x24" sizes (MIX) are palletized together on the same single pallet containing the correct percentages of each size.



M.P.D. BIG SEVEN

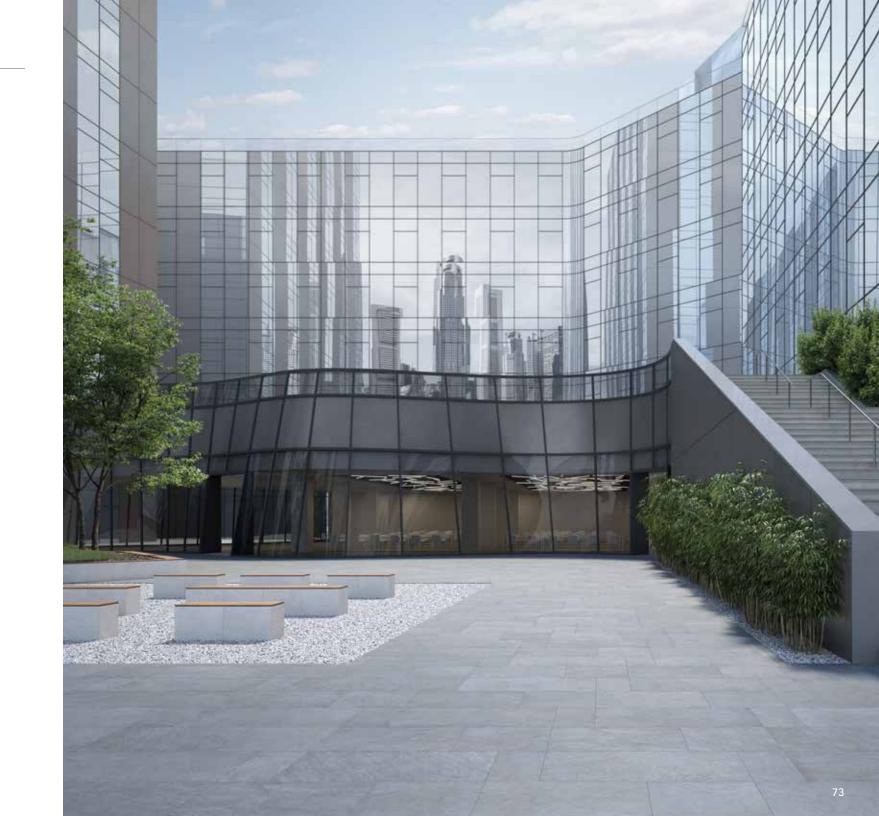




Module percentage

Note: installation possible with rectified material. Modular with 4mm (approx 5/32").

The 24"x36" and 12"x24" sizes (MIX) are palletized together on the same single pallet containing the correct percentages of each size.







TILE PERFORMANCE DATA

9 MM / 20 MM

LAYING AND CLEANING INFORMATION

LAYING SUGGESTIONS FINAL FLOOR CLEANING

PHYSICAL PROPERTIES	TEST ASTM	NORTH AMERICAN STANDARD A137.1*	RESULTS
Water absorption *	C373	≤ 0.5%	COMPLY WITH ANSI A137.1
DCOF Average dynamic coefficient of friction **	BOT 3000 test	≥ 0.42	≥ 0.42 ***
Resistance to freeze/thaw cycling *	C1026	As reported	RESISTANT
Warpage (edge)	C485	Warpage ± 0.4% or ± 0.05 in	COMPLY WITH ANSI A137.1
Warpage (diagonal)	C485	Warpage ± 0.4% or ± 0.07 in	COMPLY WITH ANSI A137.1
Wedging	C502	± 0.25% or ± 0.03 in	COMPLY WITH ANSI A137.1
Chemical resistance	C650	As reported	UNAFFECTED
Breaking strength	C648	250 lbf or greater	COMPLY WITH ANSI A137.1
Thickness	C499	Range: 0.04 in	COMPLY WITH ANSI A137.1







* Average values referred to our production and related to the matt finish of the product. ** As far as values relating to the matt finish of the product and to tests carried out by certified external laboratories whose results are avaible upon request at Headoffice, we are	Thickness	C499	
willing to check the lot you are interested in purchasing. *** Charme Lux and Magnfiica Honed doesn't not meet the 0.42 value. test results are available upon request. Be sure to use tiles belonging to the same caliber. Test results are available upon request. Those results are based on tests performed in the Landmark laboratory, or by other accredited third parties laboratories over the past months and represent by no means performance guarantee. Landmark tiles can be slippery when wet. We recommend to make sure that the surface is always dry. The information provided can be subject to change. Please refer to Icusa.com for the latest, most accurate and up-to-date information.	 Average values referred to our production and related to the matt finish of the product. As far as values relating to the matt finish of the product and to tests carried out by certified external labor willing to check the lot you are interested in purchasing. Be sure to use pavers belonging to the same caliber. Test results are available on request. The information provided can be subject to change. Please refer to https://hardscape.landmarkceramic 		

PHYSICAL PROPERTIES	TEST ASTM	NORTH AMERICAN STANDARD A137.1*	RESULTS
Water absorption *	C373	≤ 0.5%	COMPLY WITH ANSI A137.1
DCOF Average dynamic coefficient of friction **	BOT 3000 test	≥ 0.42	≥ 0.42
Skid Resistance	DIN 51097		A+B+C
Skid resistance	DIN 51130	-	R11
Resistance to freeze/thaw cycling *	C1026	As reported	RESISTANT
Warpage (edge)	C485	Warpage ± 0.4% or ± 0.05 in	COMPLY WITH ANSI A137.1
Warpage (diagonal)	C485	Warpage ± 0.4% or ± 0.07 in	COMPLY WITH ANSI A137.1
Wedging	C502	± 0.25% or ± 0.03 in	COMPLY WITH ANSI A137.1
Chemical resistance	C650	As reported	UNAFFECTED
Breaking strength	C648	250 lbf or greater	2200 lbf
Thickness	C499	Range: 0.04 in	COMPLY WITH ANSI A137.1

- aboratories whose results are avaible upon request at Headoffice, we are
- mics.com for the latest, most accurate and up-to-date information.



Information

WARNING

Please contact Landmark Ceramics to verify compatibility between the choosen product and the laying pattern.

RECOMMENDED USE FOR 9 MM THICK - MATT FINISH PRODUCTS (ALL COLLECTIONS)

These products are recommended for indoor floors, walls, countertops, and outdoor walls in commercial and residential application. The use of these products is not recommended for horizontal exterior surfaces that require anti-slip features. Landmark recommends an offset no greater than 30%, If a staggered pattern is required for tiles of 20" inches or longer. Visit Icusa.com for detailed instructions of installation.

RECOMMENDED USE FOR 9 MM THICK - HONED AND LUX FINISH PRODUCTS (ALL COLLECTIONS)

These products are recommended for indoor floors, walls, countertops, and outdoor walls in commercial and residential application. The use of these products is not recommended for horizontal exterior surfaces that require anti-slip features. We do recommend not using the honed and Lux finish for wet areas where deposits of water are likely to occur. Landmark recommends an offset no greater than 30%, If a staggered pattern is required for tiles of 20" inches or longer. Visit lcusa.com for detailed instructions of installation.

RECOMMENDED USE FOR 20 MM THICK PRODUCTS (ALL COLLECTIONS)

These products are recommended for indoor floors, walls, countertops, and outdoor floor and walls in commercial and residential application. Landmark recommends an offset no greater than 30%, If a staggered pattern is required for tiles of 20" inches or longer. Visit lcusa.com for detailed instructions of installation.

CARE AND MAINTENANCE

Do not apply any wax or sealer to the product after installation. Before grouting ensure that you apply a grout release when using honed or lux finish. Regular cleaning is the best way to keep Magnifica, Charme, Charme Lux tiles looking good. Use clean, hot water (add household cleaner for more aggressive cleaning). Rinse thoroughly and dry with a soft cloth to prevent water spots. Please visit lcusa.com. For further information regarding the care and maintenance of Landmark products.

The use of the Lux finish is limited to wall cladding and floor application in residential venues and in spaces subject to low footfall, avoiding the direct contact with outdoor areas which require anti-slip features.

WARRANTY

Landmark guarantees that its products will meet or exceed the performance specifications set out in ANSI A137.1- 2012 and in the performance specifications section of this catalog. For more information, please visit our website at **lcusa.com**.



Laying suggestions

Foundation layer, joints

When large areas must be tiled, it is necessary to pay great attention when designing the foundation structures which must take the following elements into account.

- EXPANSION DUE TO HEAT
- DEFORMATION AND SPLITTING DUE TO SHRINKAGE
- STRUCTURAL SETTLING

The presence of an insulating layer (like vermiculite or opencell clay) in the foundation could lead to possible settling due to lesser resistance of this material to compression. This inconvenience can be avoided by adding electrowelded netting to the foundation. The mortar forming the laying surface, which should be at least 5 cm thick, should have the following composition: WASHED SAND (Ø MAX 0,3 mm) 1 m3/CEMENT 325:200 Kg., WATER 80-100 I iters. When spreading the mechanically mixed material, it is advisable to limit the laying area in order to always ensure a wet surface. It is advisable to break up large areas into sectors measuring 4x4 or 5x5 m.

Insert polystyrene or polyurethane foam strips whenever continuing with the casting. These strips should be about 1 cm wide and should be as thick as the foundation layer (construction joints). These joints should also be made along perimeter walls and near columns and stairways (desolation joints). It is very important to match the bed joints with those of the flooring. Two methods exist for laying tiles: they can be laid side by side, in a continuous fashion, which is called "CLOSED JOINT" (Fig. 1 A), or leaving consistent spaces between tiles. This is called "OPEN JOINT" (Fig. 1 B); the recommended gap is 2-3 mm. An advantage of the open joint method is to favor stucture setting therefore consenting a better overall adaption of the flooring to the technical-structual variations.

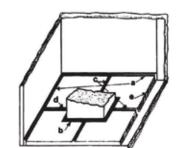
"EXPANSION JOINTS" (Fig. 2 and 3): they are extremely important and a lot of attention must be given towards their realization. They are needed to compensate variations or deformations and they allow thermal and hygroscopic expansions of the mortar bed.



Fig. 1A



Fig. 1B



- expansion joint
- separating joint
- shrinkage-flexure joint
- construction joint
- structure joint

Plastic cement

Ceramic tile

Non-deteriorating pluggin material

Binding layer

Rough frame

Polystyrene

Laying

The flooring can be laid either traditionally with cement or with adhesive

1) In the event of traditional laying, this will be achieved in the same way as a normal ceramic floor by adapting certain expedients:

- The material should not be immersed in water before laying;
- The cement dusting must be increased to 5-8 Kg/m2;
- Tap the floor with the appropriate device until liquid cement escapes from the gaps.

2) When laying with adhesives, which is preferable, we recommend, using cement-based or organic adhesives with the addition of resinous latex additives:

- Preparing the subsurface thoroughly: ensure that it is perfectly flat, without cracks and well cleaned.
- Preparing the adhesive: mix all ingredients mechanically or by hand, leaving to stand for about 10-15 minutes.
- Applying the adhesive and laying the tiles: spread with a special notched spreader over small areas; apply the tiles by pressing on the surface: try to detach a few tiles to check adhesion.

Grouting the joints

It is necessary to take into consideration that, while preparing the grout, the dosage of water (and/or latex) must strictly follow the instructions without diluting it excessively and that grouts must be selected according to their granulometry and depending on the width of the grout lines. After grouting using cement grouts (for epoxy grouts the procedure is totally different therefore please consult our on-line handbook or that of the manufacturer), it is necessary to wait for a short period of time, ranging from a few minutes to a few hours depending on weather conditions, until the grout becomes opaque, then it is possible to proceed with the removal of excess grout using a clean and slightly wet sponge. After a period of around 48 hours, the first cleaning of the entire tiled surface can be carried out.

The grouting of the joints must be done the day after the laying. The joints must be completely clean throughout their entire body. The underside and edges of the tile must be carefully soaked. The grouting and the jointing must be performed with prepared grout found on the market. The joints are normally grouted with rubber spatulas, letting the grout penetrate the depths. Everything is left to dry. When the sealant starts to take hold, the excess should then be removed with a wet sponge.

N.B.: It is not advised to use sand or sawdust that digs into and removes the grout that is still fresh from the joints. We also advise against the use of colored grouts that, if not removed in the appropriate amount of time, can leave deposits on the tiles that are difficult to remove. For more detailed information, consult **www.lcusa.com**.

Final floor cleaning

First floor deep cleaning after installation

After Grouting the Joints (pic. 1) It is important to remove the excess grout with a sponge and clear water (pic. 2). After 12/48 hours, the grout in the joints will have "set up"/hardened significantly. There will be a noticeable residual "haze". Typically, a diluted acid cleaner specifically for removing "Grout Haze", combined with a soft scrubbing pad will remove the majority if not all the "Haze". Change your acid/water solution frequently for best results. It is also recommended to keep a bucket of clean water to remove the acid/water solution. It is recommended to keep and use clean dry towels to help remove as much residual water and keep the floor as dry as possible.

Please refer to the cleaning chemical company's suggested methods and dilution rates. (pic. 3). For areas with excess grout or grout that becomes adhered to the face of the tile, further cleaning with an Acid/Water Solution may be necessary. Please refer to the Cleaning Chemical Company's instructions as not all acids or chemicals are the same.

The excess grout residue (pic. 4-5) must be removed so that it does not dry and stick on the surface. It is necessary to change the cleaning water frequently and rinse well. Care must be taken on inlayed, polished and especially Anti Slip products similar to Frontier20. The use of a floor-washing machine combined with the use of a diluted acid detergent helps reach the spaces between adjacent tiles and clean them properly. If such a cleaning procedure is not carried out, or if such cleaning is carried out too late, the grout residue creates an absorbent film, which holds dirt, making the surface difficult to clean: in this case, **Landmark Ceramics** will not be liable for any damage caused to the surface.

Ordinary cleaning

Ordinary maintenance must be carried out using specialized detergents to remove stains but these detergents must not leave a wax, film or membrane residue. Rinsing well with plenty of clean water is a fundamental part of the cleaning procedure, therefore we advise against the use of products which state that they "do not need rinsing".

Other recommendations

Bright colored products, in particular white and extra-white tiles, are very delicate and, although for all intent and purpose are hygienically clean, However, they can get dirty more easily than darker tiles. It is therefore necessary to remember that these particular products require careful regular maintenance. Sealers are unnecessary. Sealing will change the D.C.O.F. (Dynamic Co-efficient of Friction) resulting in a surface that will become more slippery. Also because Porcelain has such a low absorption the sealer will unlikely stick and most likely the sealer will flake off over time.



PIC 1. Fill joint with grout.



PIC 2. P Remove excess grout A with clean water. A



PIC 3.
Add specific acid cleaning agent for porcelain tile to clean water.



PIC 4. First floor deep cleaning after 12/48 h from installation.



PIC 5. Removal of excess grout residues with hard brush.

TYPE OF STAIN	SOLUTION	DETERGENTS	MANUFACTURER	
INORGANIC STAINS				
Cement Carbon Calcium Efflorescence Chalk Metallic residues Rust Cement-based grout Colored grout Wall paint		DETERGENT WITH	H AN ACID BASIS *	
	Acid	DETERDEK or similar	UNITED STATES > Fila Chemicals USA, Corp.10800 N.W. 21st Street #170 Miami, FL 33172 USA Tel. +1-305-513-0708 email filausa@filasolutions.com	
		KERANET (liquid) or similar	MAPEI Americas Headquarters 1144 E. Newport Center Drive Deerfield Beach, Florida 33442	
ORGANIC STAINS				

		ORGANIC STAINS		
0 01	Alkaline and neutral	LIMITED FOAM TYPE PRODUCT **		
Coca Cola Ice Cream Coffee Wine Beer Animal fats Vegetable fats Mustard Mayonnaise Ketchup Jam Linseed oil Lipstick Wax		PS87 or similar	UNITED STATES > Fila Chemicals USA, Corp.10800 N.W. 21st Street #170 Miami, FL 33172 USA Tel. +1-305-513-0708 email filausa@filasolutions.com	
		FILACLEANER or similar	UNITED STATES > Fila Chemicals USA, Corp.10800 N.W. 21st Street #170 Miami, FL 33172 USA Tel. +1-305-513-0708 email filausa@filasolutions.com	
		Ammonium	Universal	
RESIDUAL RINGS of organic nature	Saline solution	Sodium hypochloride (bleach for white laundry)	Universal	
Silicone oils Machine Oil Resins and glazes Coal and natural rubber Encres		FILASOLV or similar	UNITED STATES > Fila Chemicals USA, Corp.10800 N.W. 21st Street #170 Miami, FL 33172 USA Tel. +1-305-513-0708 email filausa@filasolutions.com	
		Aceton	Universal	
et feutres		NITRO - THINNER	Universal	
		TURPENTINE	Universal	
		TRICHLORETHYLENE	Universal	
Tire		CIF AMMONIACAL	Universal	
		HAND CLEANSER	Universal	
Silicone and chewin-gum		Ice+scraper		

N.B. When using the above products, the instructions on the package should be followed.

- Detergent with an acid base: a detergent with an acid basis, specifically recommended after bath floor or wall installation, for the decalcioficant cleaning and the regular maintenance.
- .. Limited foam type product: a limited foam type product degreesing and general cleaning, suitable for all types of stains but especially for remove of vegetable and animals fats.

Warning

The above suggestions are a result of research, laboratory tests and several years' experience. However, the cleaning features of the materials may vary significantly according to the different installation methods, conditions of use, types of surface and destination. As a general rule, the higher the anti-slip values of the tiles are, the greater cleaning inconveniences may arise.

The professional operator in charge of maintenance and cleaning shall always check the surface condition before proceeding with any cleaning and/or maintenance operation (we would suggest to test some tiles before installation). Landmark Ceramics declines any liability with reference to cleaning and maintenance operations in case of heavy conditions of use (such as mechanical workshop or spaces presenting oily residues or tire marks), bad installation work or wrong cleaning operations, it is agreed that Landmark Ceramics shall not be liable for any event, damage or defect due to wrong installation of the tiles, faulty cleaning and maintenance operations or inadequate choice of the type of material to be laid or of the adhesives used in a certain destination of use.

Tones of samples

Landmark Ceramics reserves the right to modify the products illustrated in this catalog for reasons of production or to improve quality. Samples are purely indicative. Packaging and weights may vary for production reasons. Contact our sales department when ordering.









Landmark Ceramics - UST, Inc. 1427 N. Main Street Mount Pleasant, TN 38474

Tel. 931.325.5700