Kinley

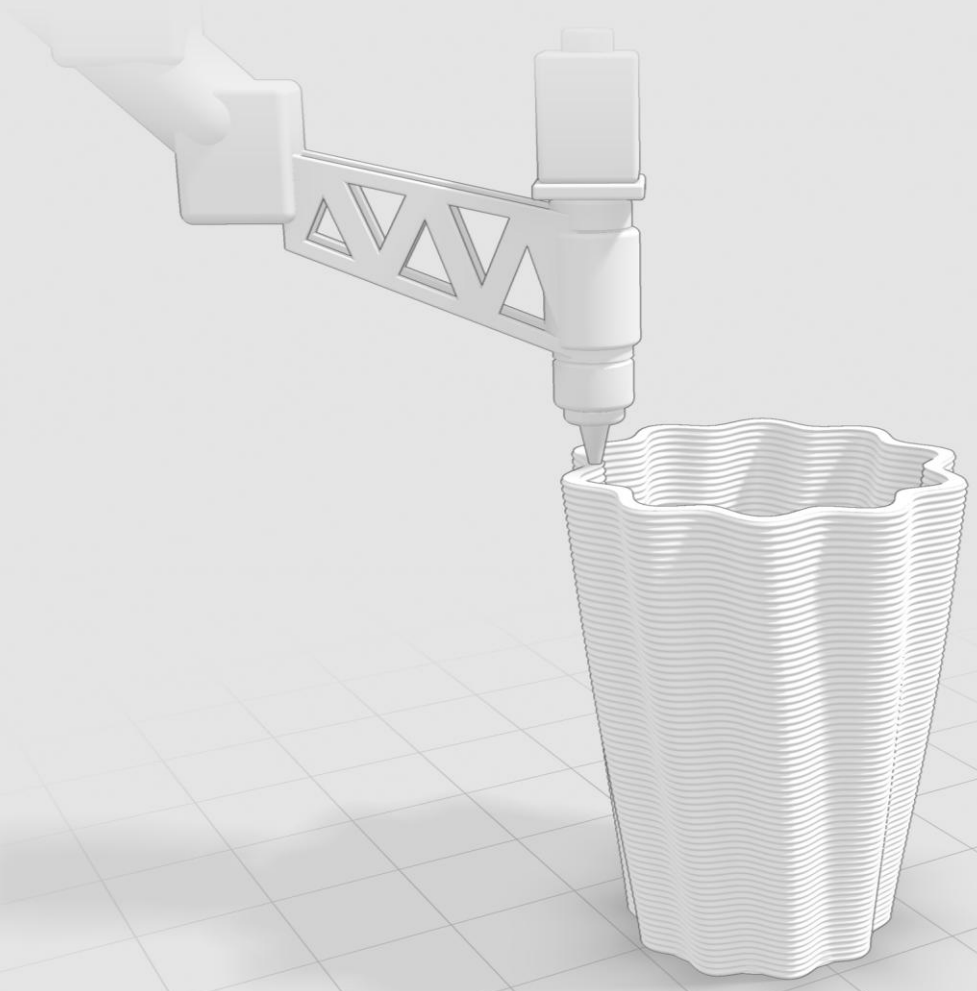
INSPIRED PLACES MADE POSSIBLE

PRINTSTONE

3D-PRINTED CONCRETE PLANTERS & FURNITURE

Technical data sheet

Robotically printed. No moulds. Built to last outdoors.



Reference:
DS-3DPS-001

OVERVIEW

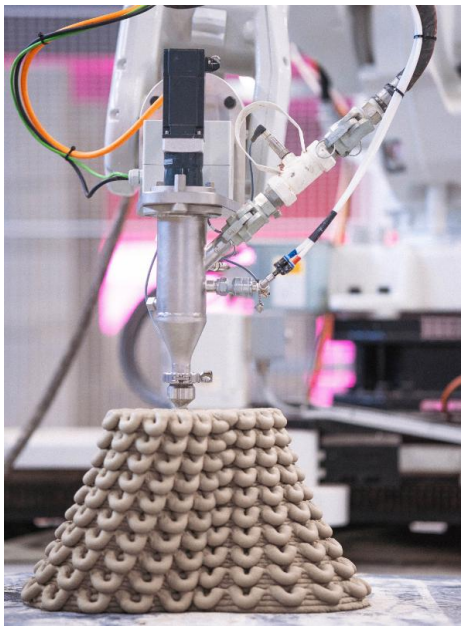
PrintStone is a range of robotically 3D-printed concrete planters and furniture for internal and external use. Each piece is built layer by layer without moulds, so bespoke geometry, integrated drainage and surface textures come without additional tooling costs or lead times. The range has been tested to withstand demanding external environments.

Kinley has selected a range of products that can be modified, recoloured and adapted, giving designers the creative freedom to develop statement pieces, bespoke forms and concepts tailored to individual projects.

This datasheet summarises the selected PrintStone range and its potential applications.

KEY BENEFITS

- ✓ Robotically 3D-printed — no moulds required
- ✓ Bespoke geometry, drainage and texture as standard
- ✓ Freeze-thaw & de-icing salt tested to DIN CEN/TS 12390-9
- ✓ Sikacrete®-2701 3D structural mortar
- ✓ 10 standard colour ranges available with more available upon request
- ✓ Reduced material waste versus mould-cast production



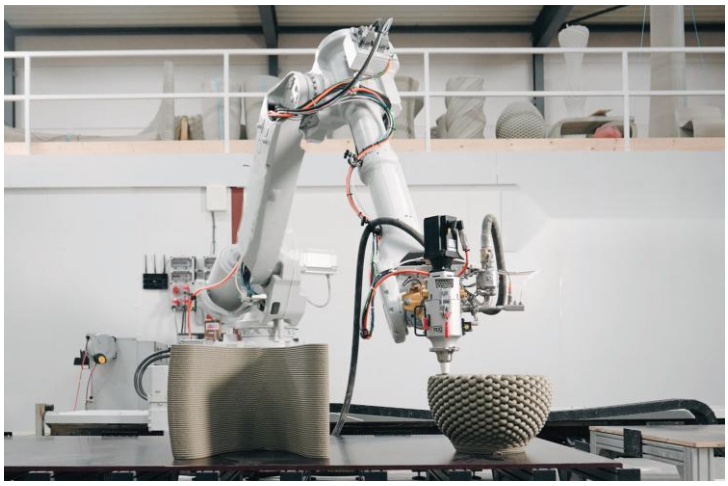
Robotic print head depositing concrete layer by layer.

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MANUFACTURING PROCESS



Robotic 3D-printing in progress — layered concrete deposition forming bespoke planter geometry.

SUSTAINABILITY

The additive manufacturing process reduces material waste versus mould-cast production, with mix quantities generated to match each printed geometry. Concrete is dosed and printed on demand, minimising offcuts and enabling lightweight, optimised wall sections without loss of structural performance.

AVAILABLE FINISHES & FORMATS

- **Textures:** woven, ribbed, fluted and smooth-ground surface textures, printed directly into the concrete layer profile.
- **Sizing:** standard and bespoke sizes, printed to project-specific plans.
- **Colour:** natural grey or pigmented concrete, plus over 40 RAL-matched powder-coat and mineral finishes on request.
- **Geometry:** straight, curved and prism (angled) wall geometries for planting beds, seating integration and pathway edging.

ADDITIONAL CLIMATE TESTING

- **Climate Change Test:** DIN EN 60068-2-38:2010, 240 hours — samples remained structurally intact; minor surface pinholes observed.
- **Artificial Weathering Test:** DIN EN ISO 4892-3:2016, 500 hours — no visual surface change observed after artificial weathering.

SPECIFICATION NOTES

All PrintStone pieces are supplied as project-specific items. Final dimensions, wall geometry, finish, colour and drainage configuration should be confirmed against the individual scheme, planting design and structural loading requirements before order and specification.

Project integration with the Raaft roof terrace system does not remove the requirement for project-specific structural assessment. Point loads, drainage routing and the roof membrane must be considered and protected throughout delivery and installation.

6-MONTH WARRANTY

Covers cracks, chips or damage exceeding **1 mm**. Where required, repairs will be carried out on site. If the product cannot be repaired, it will be replaced.

COLOUR OPTIONS *(swatches indicative only)*

Black	Dark Grey	Red	Pink	Brown I	Brown II	Yellow	Blue	Green	Titanium White

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PRODUCT EXAMPLES

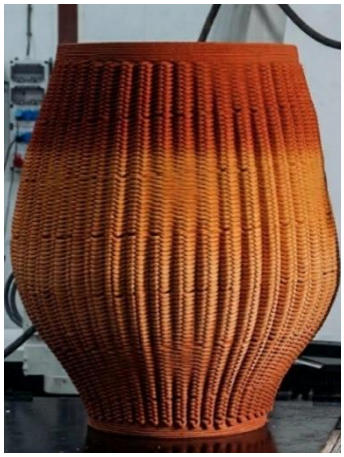
A selection of standard surface textures and formats. All PrintStone planters are robotically 3D-printed to project-specific dimensions — see Design Options for the full range.



WOVEN TEXTURE FINISH
Spherical planter shown in woven surface texture, printed directly into the concrete layer profile.



TAPERED SQUARE FORMAT
Tapered square planter in woven texture finish.



RIBBED TEXTURE FINISH
Ribbed-texture planter in a dual-tone finish, printed layer-by-layer.

FREEZE-THAW & DE-ICING SALT PERFORMANCE

Individual specimen scaling values (n=5): 126, 85, 118, 111 and 962 g/m². The single elevated result was retained in the reported mean and 95% quantile calculations; both remain comfortably within the DIN CEN/TS 12390-9 pass thresholds, indicating consistent freeze-thaw and de-icing salt performance across the print batch.

PROPERTY	RESULT
Test method	DIN CEN/TS 12390-9 (DIN SPEC 91167) — CDF Test Method
Test liquid	3% NaCl (de-icing salt) solution
Material tested	Sikacrete®-2701 3D (3D-printed structural mortar)
Freeze-thaw cycles	28 cycles
Specimen age at test start	40 days
Mean scaling after 28 cycles	280 g/m² (limit <1500 g/m²) — PASSED
Standard deviation	341 g/m²
95% quantile	795 g/m² (limit <1800 g/m²) — PASSED
Result	Scaling resistance requirements satisfied

Independently tested to DIN CEN/TS 12390-9 by an accredited materials laboratory (Report CDF 27/25, dated 4 March 2026).

Composition: Sikacrete®-2701 3D structural mortar, deposited layer-by-layer by robotic concrete printer.

Maintenance: concrete is low-maintenance and highly durable; see Maintenance & Care on page 7 for routine checks.

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DESIGN OPTIONS

PrintStone pieces are available in the standard forms shown below. As each piece is robotically 3D-printed to order, dimensions can be customised to project requirements — contact us to discuss bespoke geometry, size or finish.

BENCH



Benmore
H × W: 350 × 1460 mm
Weight: 73 kg
SKU: PRS-BEN-BCH-350x1460

CHAIRS



Cairn
H × W: 830 × 680 mm
Weight: 92 kg
SKU: PRS-CAI-CHA-830x680

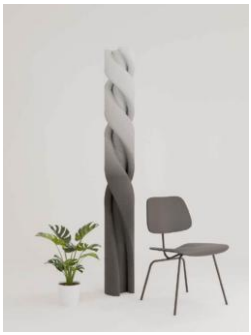


Strathen
H × W: 1070 × 750 mm
Weight: 186 kg
SKU: PRS-STR-CHA-1070x750

COLUMNS



Skye
H × W: 2510 × 470 mm
Weight: 179 kg
SKU: PRS-SKY-COL-2510x470



Torran
H × W: 1820 × 230 mm
Weight: 104 kg
SKU: PRS-TOR-COL-1820x230

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DESIGN OPTIONS (CONTINUED)

PLANTERS



Rannoch
H × W: 510 × 320 mm
Weight: 22 kg
SKU: PRS-RAN-PLA-510x320



Dunra
H × W: 770 × 420 mm
Weight: 61 kg
SKU: PRS-DUN-PLA-770x420



Crag
H × W: 580 × 530 mm
Weight: 76 kg
SKU: PRS-CRA-PLA-580x530



Dunrock
H × W: 580 × 530 mm
Weight: 64 kg
SKU: PRS-DUN-PLA-580x530



Lochan
H × W: 580 × 730 mm
Weight: 94 kg
SKU: PRS-LOC-PLA-580x730



Moraine
H × W: 580 × 520 mm
Weight: 86 kg
SKU: PRS-MOR-PLA-580x520



Glenmore
H × W: 560 × 620 mm
Weight: 83 kg
SKU: PRS-GLE-PLA-560x620



Arran
H × W: 510 × 380 mm
Weight: 23 kg
SKU: PRS-ARR-PLA-510x380



Muiren
H × W: 510 × 400 mm
Weight: 28 kg
SKU: PRS-MUI-PLA-510x400

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RANGE QUICK REFERENCE

Standard sizes, weights and SKUs for the PrintStone range. Please quote the SKU when ordering.

RANGE	TYPE	H × W (MM)	WEIGHT (KG)	SKU
Benmore	Bench	350 × 1460	73	PRS-BEN-BCH-350x1460
Cairn	Chair	830 × 680	92	PRS-CAI-CHA-830x680
Strathen	Chair	1070 × 750	186	PRS-STR-CHA-1070x750
Skye	Column	2510 × 470	179	PRS-SKY-COL-2510x470
Torran	Column	1820 × 230	104	PRS-TOR-COL-1820x230
Rannoch	Planter	510 × 320	22	PRS-RAN-PLA-510x320
Dunra	Planter	770 × 420	61	PRS-DUN-PLA-770x420
Crag	Planter	580 × 530	76	PRS-CRA-PLA-580x530
Dunrock	Planter	580 × 530	64	PRS-DUN-PLA-580x530
Lochan	Planter	580 × 730	94	PRS-LOC-PLA-580x730
Moraine	Planter	580 × 520	86	PRS-MOR-PLA-580x520
Glenmore	Planter	560 × 620	83	PRS-GLE-PLA-560x620
Arran	Planter	510 × 380	23	PRS-ARR-PLA-510x380
Muiren	Planter	510 × 400	28	PRS-MUI-PLA-510x400

MAINTENANCE & CARE

Concrete is low-maintenance and highly durable. Follow the schedule below, together with these care notes.

— **Clean:** soft brush and mild, pH-neutral detergent. Avoid abrasives, bleach, acids and solvents.
— **Drainage:** keep holes clear and avoid standing water; use a liner or drip tray for indoor planting.
— **Winter:** clear snow/ice with a soft brush or plastic shovel — no metal tools or de-icing chemicals.
— **Moving:** empty first, then lift from the base — never drag.

Minor colour variation and surface crazing are natural characteristics of concrete and do not affect performance.

MAINTENANCE SCHEDULE

TASK	OUTDOOR	INDOOR
Clean	Every 3–6 months	As required
Inspect for damage	Twice yearly	Annually
Check drainage	Monthly	Monthly (if applicable)
Remove debris	As required	N/A
Inspect sealer (if applied)	Every 3–5 years	As required
Check stability	Twice yearly	Annually

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