INFINITE HOME

ASA CO-EXTRUDED PVC FOAMED WPC TECHNICAL DATA SHEET

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1. Document Guide

This document presents material construction, third-party test results, factory laboratory results and nominal profile data for ASA co-extruded PVC foamed WPC. It supports technical review and product selection; project suitability depends on the selected profile and installation configuration.

Information covers material construction and compliance, physical, mechanical and thermal properties, temperature performance, weathering, manufacturing quality and installation considerations. Appendix A provides available profile drawings and dimensions.

Test Data Classification

Class and Data Source	Meaning
A. THIRD-PARTY TEST	Independent external laboratory test result.
B. INFINITE HOME LABORATORY TEST	Factory laboratory test under the conditions stated in this document.
C. TYPICAL PRODUCTION DATA	Typical production values derived from routine manufacturing measurements.
D. DESIGN / INSTALLATION REFERENCE	Guidance for product selection and installation. Not structural design values unless specifically stated.

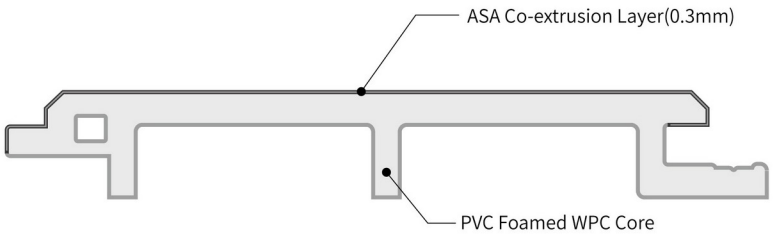
A data source label identifies the origin of the record. Internal test records and third-party reports apply to their stated samples and configurations; nominal product dimensions and weights are separate production data.

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2. Product Technology Overview

The construction combines an ASA-based co-extrusion layer with a PVC foamed wood plastic composite core. The surface layer is intended to support weather exposure protection, UV resistance, exterior color retention and surface protection. Performance must be interpreted through the applicable test evidence and profile configuration.



ASA co-extrusion layer and PVC foamed WPC core. Nominal ASA layer thickness: 0.3 mm. Schematic is not to scale.

Typical applications include exterior cladding, facades, soffits, balconies, timber tubes / louvers and decorative exterior profiles. Application suitability requires review of the actual profile, support and fixing arrangement.

3. Material Construction & Compliance

Material Composition

Component	Material	Primary Function	Data Type / Notes
Surface Layer	ASA-based co-extrusion compound	Exterior surface protection	Nominal ASA layer thickness: 0.3 mm.
Core	PVC + wood fiber + mineral filler + functional additives	Foamed profile body	Typical production data

Material Compliance

Assessment	Reported Result	Report / Scope	Data Source
RoHS	PASS	220309064GZU-001, March 16, 2022. PDCO-X (115 × 16 mm); light blue coating and uncoated substrate.	THIRD-PARTY TEST
REACH / SVHC	PASS - Meet Requirement	260824002SHF-001, September 4, 2026. PDCO-X, 115 × 16 mm; co-extruded layer + substrate (1+2).	THIRD-PARTY TEST

Technical note. RoHS screening references Directive 2011/65/EU and (EU) 2015/863. SVHC screening covers the report's 253 listed SVHCs (effective February 2026) and one proposed SVHC; tested substances were ND, reporting limit 0.010% (w/w). Conclusions apply to the tested components and reported list, not an unrestricted claim for all products or future lists.

Tested components, sample identities, report dates and laboratories are listed in Section 11. Compliance results apply to the tested components and the substances covered by each report.

4. Physical Properties

4.1 General Material Properties

Property	Result	Unit	Test Method	Data Source	Test Information
Water Absorption	0.50	%	ASTM D1037-12 Section 23 Method B	THIRD-PARTY TEST	20°C immersion for 24 h.
Thickness Swelling	0.36	%	ASTM D1037-12 Section 23 Method B	THIRD-PARTY TEST	20°C immersion for 24 h.
Linear Expansion with Change in Moisture Content	0.013	%	ASTM D1037-12 Section 24	THIRD-PARTY TEST	20°C; 50% to 90% RH, equilibrium.
Density	0.8	g/cm^3	INFINITE HOME HD-D01; electronic solid density tester	INFINITE HOME LABORATORY TEST	PDCO-X cut pieces including ASA layer; mean of 3 specimens; September 10, 2026.
Production Density Range	0.8–0.85	g/cm^3	Routine production control; same measurement basis as HD-D01	TYPICAL PRODUCTION DATA	All wall cladding profiles; production control range and observed typical range.

Technical note. Third-party physical results: SGS reports GZIN2012073567CM and GZIN2012073562CM, issued January 21, 2021; submitted wall panel 115 × 16 mm. Results apply to prepared specimens; see the report register.

4.2 Profile Properties

Outdoor Wall Cladding series - 6 current profiles. Data Source: TYPICAL PRODUCTION DATA.

Profile ID	Overall Width (mm)	Thickness (mm)	Installed Width (mm)	Mass (kg/m)	Coverage Mass (kg/m^2)
PDCO-X	115	16	100	0.62	6.20
15PDCO-X	163.5	16	150	0.94	6.27
PWCO-X	224	26	210	1.33	6.33
6PDCO-X	73.5	16	60	0.36	6.00
PWCO-A	190	20	175	1.05	6.00
PDCO-A	120	12	100	0.51	5.10

Technical note. Dimensions and weights are nominal product data. Coverage mass is based on the listed installed width, rounded to two decimal places, with no extra installation gap assumed. Density is measured on cut pieces including the ASA layer using an electronic solid density tester; hollow profile geometry does not affect this material density measurement.

5. Mechanical Properties

5.1 Material Mechanical Properties

Property	Result	Unit	Test Method	Data Source	Report Reference
Modulus of Elasticity	2204	MPa	ASTM D6109-19 Method A	THIRD-PARTY TEST	GZIN2012073561CM
Flexural Strength	30.58	MPa	ASTM D6109-19 Method A	THIRD-PARTY TEST	GZIN2012073558CM

Technical note. SGS, January 21, 2021: submitted panel 115 × 16 mm; cut specimens 100 × 32.41 × 4.90 mm, support span 80 mm, reported load span 27 mm, speed 2 mm/min. These prepared-specimen results differ from the full-profile tests below.

5.2 Profile-specific Mechanical Performance

Data Source: INFINITE HOME LABORATORY TEST. Test date: October 13, 2026. Three-point bending; span 400 mm, loading speed 30 mm/min, specimen length 500 mm. Values are means of three specimens per profile. Specimen length was aligned with the extrusion direction; the loading nose was perpendicular to the specimen length. Deflection was measured independently at midspan.

Profile ID	Section Size (mm)	Maximum Load (N)	Deflection at Max. Load (mm)	Endpoint Deflection (mm)	Failure Mode
PDCO-X	115 × 16	928	39.81	84.71	Complete fracture
15PDCO-X	163.5 × 16	1020	45.35	63.75	Complete fracture
PWCO-X	224 × 26	4428	21.23	39.11	Rib / cavity collapse
6PDCO-X	73.5 × 16	640	38.9	49	Edge / interlock cracking
PWCO-A	190 × 20	3285	29.2	47	Rib / cavity collapse
PDCO-A	120 × 12	467	75	92.6	Permanent bending deformation

Technical note. Endpoint deflection is the independently measured midspan deflection at automatic test termination, triggered by a sudden load drop, typically associated with complete or partial fracture. Failure modes describe the observed specimen response. Internal test reference: HD-B01.

Technical note. Laboratory maximum loads are not allowable structural design loads. Do not compare these 400 mm span results directly with the 260 mm span temperature tests. Product geometry, span, orientation and fixing configuration affect performance.

6. Thermal Properties & Dimensional Stability

Thermal expansion, heat deflection and dimensional change describe different material responses under the stated test conditions. Test temperatures do not establish continuous service temperatures.

Property	Result	Unit	Test Method	Data Source	Information
Mean Coefficient of Linear Thermal Expansion	50×10^{-6}	K^{-1}	EN 15534-1:2014+A1:2017 Section 9.2; ISO 11359-2:2021 Method A	THIRD-PARTY TEST	SGS report GZIN2405000736CM01_EN; May 24, 2024.
Heat Deflection Temperature	75	℃	ISO 75-2	INFINITE HOME LABORATORY TEST	1.8 MPa; 80 × 10 × 5 mm; heating rate 120℃/h. See test details below.
Thermal Dimensional Change	-0.03	%	INFINITE HOME HD-DS01	INFINITE HOME LABORATORY TEST	60℃ for 12 h; extrusion length direction; recovery 8 h at room temperature (28℃).

CTE Test Configuration

SGS report GZIN2405000736CM01_EN, May 24, 2024. Submitted product: INFINITE HOME Co-extrusion Wall Cladding, 115 × 16 mm. Reported specimen type: plastic raw material. Three specimens, 5.49 × 5.30 × 4.78 mm; compression mode, direction indicated by an arrow in the report, load 50 mN; heating rate 5℃/min, nitrogen flow 50 mL/min. Test temperature: -20℃ to 80℃; laboratory: 23 ± 2℃, 50 ± 5% RH.

Technical note. The mean CTE applies to the specimen and direction specified in the laboratory report. The direction has not been established relative to profile extrusion; this result is not declared as an extrusion-direction coefficient for the installed profile.

Technical note. Installation gaps and fixing arrangements must accommodate thermal movement for the selected profile, length and installation conditions. Refer to the product-specific recommendations described in Section 10.

Technical note. HDT: PDCO-X, May 28, 2025; mean of four specimens, 80 × 10 × 5 mm, tested to ISO 75-2 at 1.8 MPa and 120℃/h. Thermal dimensional change: PDCO-X, May 22, 2025; mean of three 2240 mm specimens, conditioned at 60℃ for 12 h, then recovered for 8 h at room temperature (28℃). Length was measured along the extrusion direction. The reported change is relative to initial length after recovery; the negative value indicates shrinkage. These are internal laboratory results.

7. Temperature Performance

Temperature-conditioned Mechanical Performance

Specimen profile: PDCO-X. Data Source: INFINITE HOME LABORATORY TEST. Test date: October 16, 2026; production batch: A1061. Three-point bending; span 260 mm, loading speed 30 mm/min, specimen length 300 mm. Each condition is the mean of three specimens from the same batch. Specimen length aligned with the extrusion direction; the loading nose was oriented perpendicular to the specimen length.

Condition	Conditioning / Recovery	Maximum Load (N)	Retention (%)	Deflection at Max. Load (mm)	Endpoint Deflection (mm)	Failure Mode
Room Temperature	26 ± 3°C; >24 h	1325	100.0	21.84	31.98	Complete fracture
-20°C	24 h	1659	125.2	25.07	26.59	Edge cracking
-50°C Immediate Test	24 h	1694	127.8	22.81	22.84	Edge cracking
-50°C + Room-temperature Recovery	Cold 24 h; recovery 24 h	1425	107.5	22.37	33.24	Complete fracture
60°C Elevated Temperature	16 h	1153	87.0	24.37	29.13	Edge cracking
60°C + Room-temperature Recovery	Heat 16 h; recovery 8 h	1447	109.2	22.47	27.71	Complete fracture

Method and Interpretation

Internal test references: room temperature - HD-B01; cold and cold recovery - HD-LT01 + HD-B01; heat and heat recovery - HD-HT01 + HD-B01. Deflection was measured independently at midspan. Endpoint deflection was recorded at automatic test termination following a sudden load drop.

Technical note. Retention is the maximum load for each condition divided by this series' room-temperature reference of 1325 N, expressed as a percentage and rounded to one decimal place. The separate 928 N result in Section 5.2 uses a different support span and is not the reference for this series.

Technical note. Conditioning temperatures are the recorded chamber setpoints. Transfer time from conditioning equipment to the test setup was no more than 10 seconds for all temperature-conditioned tests. Results reflect the stated conditioning and transfer procedure.

Technical note. Controlled conditioning results describe this profile and test configuration. They do not establish a service temperature range, suitability for every climate, allowable design loads or the performance of other profiles.

8. Weathering & UV Resistance

Third-party accelerated UV exposure of INFINITE HOME Outdoor Wall Cladding, model PDCO-X, 115 × 16 mm. Intertek report 220114088GZU-001, issued February 16, 2022; testing January 23 to February 15, 2022. Data Source: THIRD-PARTY TEST.

Test Method	Exposure	Sample No.	Color Difference ΔE*	Gray Scale
ASTM G154-2016 Cycle 1	500 h	1	0.38	4–5
ASTM G154-2016 Cycle 1	500 h	2	0.93	4–5

Exposure Cycle

Stage	Lamp / Irradiance	Black-panel Temperature
8 h dry	UVA-340 (type 1A); 0.89 W/m²/nm at 340 nm	60 ± 3°C
4 h condensation	UV lamps off	50 ± 3°C

Technical note. The laboratory reported no visible surface color difference against the reference sample after the test. Gray Scale ratings assess visible color change; higher ratings indicate a lower visible difference under the stated conditions.

Scope of the Result

Color differences and gray scale ratings apply to the tested samples, finish and exposure cycle. The results do not establish equivalent performance for every color, formulation or profile.

Technical note. Long-term outdoor appearance depends on climate, orientation, exposure level, color, installation environment and maintenance. A 500-hour accelerated test is not converted into outdoor service years or a no-fade guarantee.

Full exposure conditions and specimen photographs are included in Intertek report 220114088GZU-001.

9. Manufacturing Quality Verification

INFINITE HOME In-house Laboratory & Quality Verification

Third-party test results are supplemented by factory laboratory testing and production monitoring. The equipment below supports material, processing and profile checks. Performance results and test configurations are stated in the relevant sections.

Equipment	Test / Control Use
Universal Testing Machine	Profile bending; load and deflection response.
HDT / Vicat Tester	Heat deflection and softening behavior.
Temperature-controlled Drying Oven	Heat conditioning and dimensional response.
Ultra-low-temperature Chest Freezer	Low-temperature conditioning.
Torque Rheometer	Compound fusion and processing behavior.
Two-roll Laboratory Mill	Laboratory mixing and material preparation.
Melt Flow Rate Tester	Melt flow characterization where applicable.
Halogen Moisture Analyzer	Material moisture checks.
Direct-reading Solid Density Tester	Density checks using a defined measurement basis.





INFINITE HOME laboratory operations: universal testing machine (left); HDT / Vicat tester (right).

Production Quality Records

Dimensions, mass, density and appearance are checked during production line inspections twice daily. Bending performance is sampled at least once during each extrusion run for each profile and color combination; long orders are sampled every three days. Production and laboratory records link checks to the relevant products and batches.

Technical note. The equipment list describes the in-house laboratory facilities. Equipment ownership does not establish laboratory accreditation or certification of product performance.

10. Installation & Engineering Considerations

Data Source: DESIGN / INSTALLATION REFERENCE. The following principles support product selection. Obtain product-specific installation details from INFINITE HOME for the selected profile and project.

Thermal Movement and Expansion Allowance. Consider temperature change, restraint, profile length and joint arrangement. Obtain approved gap requirements for the selected product.

Substructure and Fixing. Confirm substrate, support arrangement and connection configuration for project loads. Obtain approved support spacing and fixing details.

Ventilation and Drainage. Provide the ventilation and drainage arrangement required by the selected facade or soffit assembly.

Fastener Selection and Profile Orientation. Select compatible fasteners for substrate and exposure. Follow the profile drawing for orientation, engagement and permitted fixing zones.

Technical note. Contact INFINITE HOME for product-specific fixing, support spacing and expansion gap recommendations. Installation details must be confirmed for the selected profile, substrate, exposure and project requirements. No universal support spacing or installation gap is declared here.

11. Test Method Index

HD identifiers reference INFINITE HOME internal tests. Applicable external standards and test conditions are stated with each result. Data Source: INFINITE HOME LABORATORY TEST.

Method ID	Test / Procedure	Test Summary
HD-D01	Density of ASA-capped Cut Pieces	PDCO-X; 0.8 g/cm³, mean of 3; September 10, 2026.
HD-B01	Profile 3-Point Bending	Section 5.2; October 13, 2026; independent midspan deflection measurement.
HD-H01	Heat Deflection Temperature	PDCO-X; 75°C, mean of 4; May 28, 2025; ISO 75-2, 1.8 MPa, 120°C/h.
HD-LT01	Low Temperature Conditioning	Section 7; October 16, 2026; batch A1061.
HD-HT01	Elevated Temperature Conditioning	Section 7; October 16, 2026; batch A1061.
HD-DS01	Thermal Dimensional Stability	PDCO-X; -0.03%, mean of 3; May 22, 2025. Conditions in Section 6.

Third-party Evidence Register

Evidence	Report No.	Laboratory / Issue Date	Reported Sample
Elastic modulus	GZIN2012073561CM	SGS / January 21, 2021	115 × 16 mm panel
Flexural strength	GZIN2012073558CM	SGS / January 21, 2021	115 × 16 mm panel
Water / thickness	GZIN2012073567CM	SGS / January 21, 2021	115 × 16 mm panel
Moisture linear expansion	GZIN2012073562CM	SGS / January 21, 2021	115 × 16 mm panel
Thermal expansion	GZIN2405000736CM01_EN	SGS / May 24, 2024	115 × 16 mm product; prepared specimens
UV exposure	220114088GZU-001	Intertek / February 16, 2022	PDCO-X, 115 × 16 mm
RoHS	220309064GZU-001	Intertek / March 16, 2022	PDCO-X; coating / substrate
REACH / SVHC	260824002SHF-001	Intertek / September 4, 2026	PDCO-X; layer + substrate

Technical note. SGS reports were issued by the GZ Branch Testing Center. Intertek reports were issued by the Guangzhou Branch, except the 2026 SVHC report issued by the Shanghai Fengxian Branch, with chemical testing at Wuxi. Internal test dates and conditions are listed in the test index and relevant sections.

12. Technical Notes & Disclaimer

Reported values apply to the tested samples and specified test conditions. Applicability to another profile, color, formulation, batch or geometry must be checked against supporting evidence.

Nominal dimensions and masses describe typical production values. Test results are measured performance values under the specified conditions and do not define production acceptance limits unless expressly stated.

Internal laboratory data are identified separately and shall not be represented as independent third-party certification. The internal averages in Sections 5.2 and 7 are specific to their sample selection, support spans and test conditions. Equipment ownership does not establish laboratory accreditation.

Profile-specific test loads shall not automatically be treated as allowable structural design loads. Material properties, profile maximum loads and installed-system performance describe different levels of evidence.

Suitability for individual projects must be assessed according to local building regulations, project design, installation configuration, environment and intended application. Where required, a qualified architect, engineer or other competent professional should assess the application.

HDT, conditioning temperatures and accelerated weathering results must be used within their stated test scope. This document does not establish unreported fire, termite, mold or chemical resistance classifications, structural capacity or outdoor service-life ratings.

Use product-specific installation details and applicable drawings alongside this document. INFINITE HOME reserves the right to update technical information as products, testing and manufacturing processes develop.

Document Control

Document No.	Document Version	Issue Date
HD-TDS-ASA-PVC-001	1.0	October 22, 2026

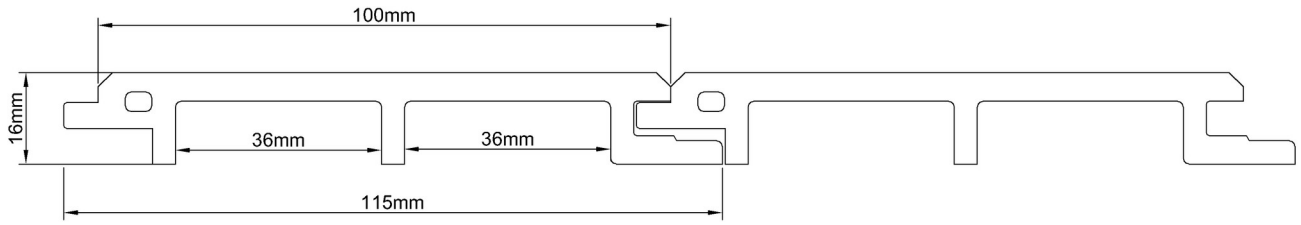
Revision History

Version	Issue Date	Revision Summary
1.0 / Rev. 00	October 22, 2026	Initial release.

Appendix A Profile Drawings and Dimensions

Tables list nominal catalog dimensions and mass. Section drawings show detailed dimensions and are not to scale. Data Source: TYPICAL PRODUCTION DATA.

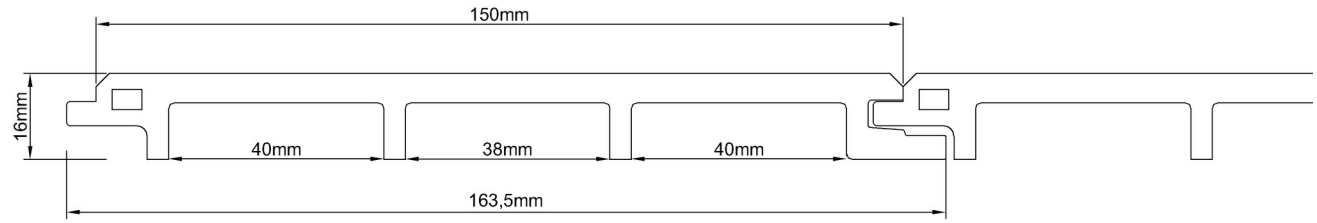
A.1 PDCO-X



Profile ID	Installed Width (mm)	Overall Width (mm)	Mass (kg/m)
PDCO-X	100	115	0.62

Drawing No.: HD-TDS-SEC-PDCO-X | Revision: 00

A.2 15PDCO-X



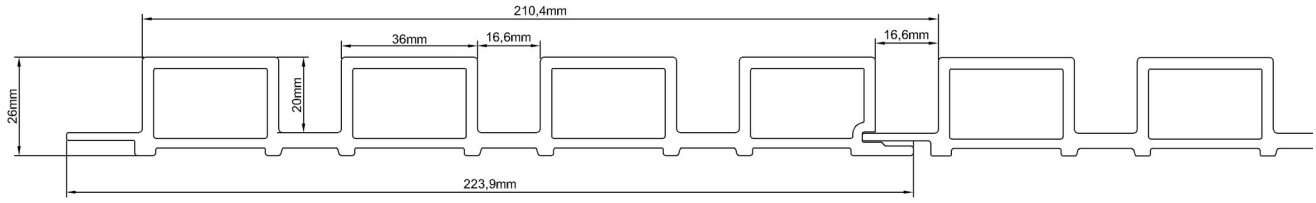
Profile ID	Installed Width (mm)	Overall Width (mm)	Mass (kg/m)
15PDCO-X	150	163.5	0.94

Drawing No.: HD-TDS-SEC-15PDCO-X | Revision: 00

Appendix A Profile Drawings and Dimensions

Tables list nominal catalog dimensions and mass. Section drawings show detailed dimensions and are not to scale. Data Source: TYPICAL PRODUCTION DATA.

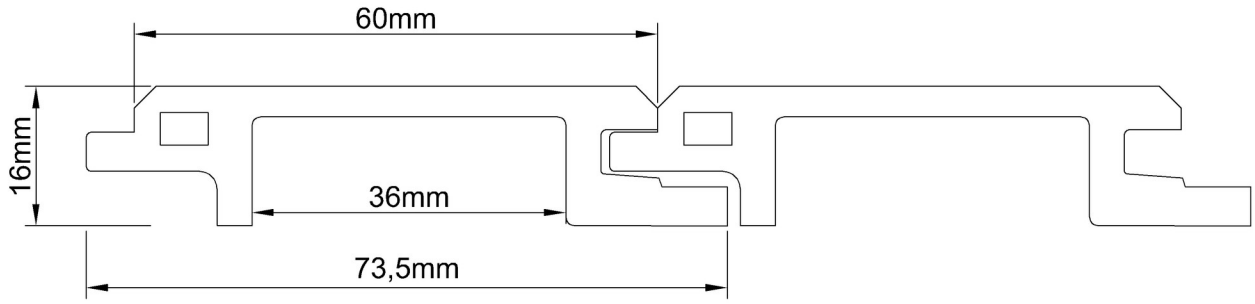
A.3 PWCO-X



Profile ID	Installed Width (mm)	Overall Width (mm)	Mass (kg/m)
PWCO-X	210	224	1.33

Drawing No.: HD-TDS-SEC-PWCO-X | Revision: 00

A.4 6PDCO-X



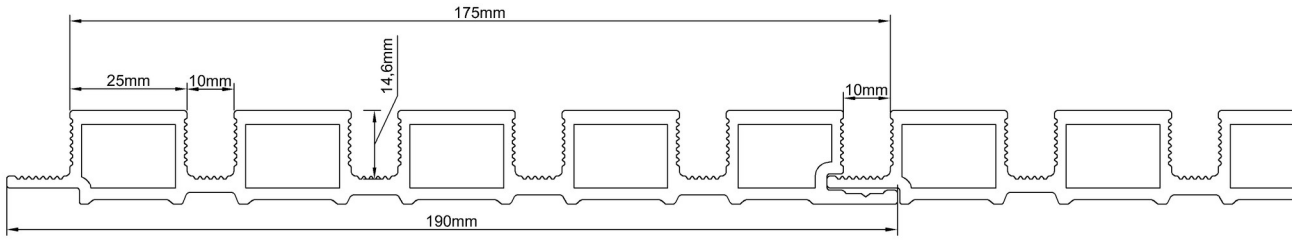
Profile ID	Installed Width (mm)	Overall Width (mm)	Mass (kg/m)
6PDCO-X	60	73.5	0.36

Drawing No.: HD-TDS-SEC-6PDCO-X | Revision: 00

Appendix A Profile Drawings and Dimensions

Tables list nominal catalog dimensions and mass. Section drawings show detailed dimensions and are not to scale. Data Source: TYPICAL PRODUCTION DATA.

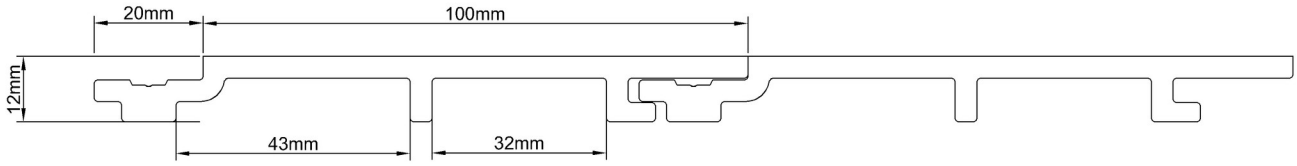
A.5 PWCO-A



Profile ID	Installed Width (mm)	Overall Width (mm)	Mass (kg/m)
PWCO-A	175	190	1.05

Drawing No.: HD-TDS-SEC-PWCO-A | Revision: 00

A.6 PDCO-A



Profile ID	Installed Width (mm)	Overall Width (mm)	Mass (kg/m)
PDCO-A	100	120	0.51

Drawing No.: HD-TDS-SEC-PDCO-A | Revision: 00