Wall & Ceiling Panels Specification and Project Procurement

A guide to decorative panel choices, net coverage, acoustic and fire evidence, support, access, quotations and receipt control.



GeorgeBuild official gallery: a material-selection discussion. The photograph does not identify a tested panel or a completed wall system.

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The central purchasing decision

Select the panel together with its backing, connections, joint geometry and evidence. A decorative face is only one layer of the specified system.

Start with the task the surface must perform

This publication serves developers, designers, contractors and buyers preparing interior wall and ceiling packages. It covers decorative WPC profiles and sheets, wood or wood-based panels, acoustic slat systems, imitation-stone panels and accessible ceiling systems. Exterior cladding, structural sheathing, waterproof shower systems and engineered fire barriers require separate design scopes.

Decision	What it changes
Visual finish or acoustic treatment?	A fluted face creates a visual rhythm. Required absorption or sound isolation needs the relevant system evidence.
Wall or overhead installation?	Orientation changes the attachment, falling-object consequence, access and supporting detail.
Dry room or demanding exposure?	Conditioned interior, condensation, direct water and exterior weather are separate exposures.
Continuous surface or serviceable lining?	Panel joints must coexist with outlets, equipment, access doors, corners and future replacement.
Listed width or installed repeat?	Quantity depends on actual joint engagement and the approved layout, not solely the catalog face width.

NOVARMIA is a new brand within GEORGE Group. Named George Panel records retain their original brand and model. This is a sourced procurement guide with original comparisons and explicitly illustrative calculations, not an original laboratory study, certified design or documented project-outcome study.

The workflow can serve global purchasing. Named US test and accessibility examples retain their jurisdictional scope; the destination and adopted requirements must be established for an actual order.

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Use one zone and revision throughout

A zone is one deliberately defined wall elevation or ceiling area with a common system and review basis. Separate zones when substrate, direction, finish, exposure or evidence changes. The Zone ID joins product selection, layout, technical records, width runs and receipts. A large floor area is not automatically one uniform installation condition.

Choose among constructions, not appearance labels

Construction	Useful when	Tradeoff to resolve
Decorative fluted WPC profile	Repeated ribs and a wood-look finish are the visual brief	Catalog profile size may not reveal net coverage, core geometry, fixing or acoustic behavior.
Flat laminated sheet	A broad continuous-looking face suits the elevation	Seams, flatness, cut-edge closure and joint movement become prominent.
Solid wood or veneered wood-based panel	The material/finish brief calls for real wood surfaces	Distinguish face veneer, substrate and solid sections; environmental conditions and matching matter.
Slat/felt acoustic panel	The room brief requires a tested absorption arrangement	Slats, felt, cavity and any insulation are an assembly choice, not interchangeable decorations.
Imitation-stone relief panel	A sculpted stone-like face is desired	Appearance does not establish natural-stone composition, rated support, water duty or fire behavior.
Accessible suspended ceiling	Services need continuing access above the finish	Grid, hooks, safety devices, perimeter and removal path belong in the purchase.

The choice is conditional. A quiet-room requirement can justify an acoustic system even when a decorative profile looks similar. A crowded service ceiling can favor removable panels over a glued lining. A deep relief wall can suit a feature area while becoming unsuitable where it reduces passage or traps an outlet behind an inaccessible recess.

Separate four identities

Material and substrate; visible surface and finish; joint/fixing system; complete installed performance. A name such as bamboo fiber, wood-look or acoustic cannot substitute for all four.

Two George Panel wall records illustrate different purchase bases

Public record	Listed fields	Decision and unresolved interface
Indoor WPC Wall Panel GP-KJ187HC [G01]	Width 187 mm; length 3,000 mm; thickness 30 mm. Material field: WPC Bamboo Fiber. Laminated surface, hot/cold pressing and side slotting.	Candidate for a pronounced fluted background wall. The listed width is not identified as net installed coverage; thickness is not proved flute depth. Obtain the actual section, engaged joint and fixing detail.
Indoor WPC Wall Panel GP-KJ-W [G02]	Widths 300/400/600/800 mm; listed length 3,000 mm; customizable length 2,000-4,000 mm; thickness 9 mm. Bamboo Fiber/Wood-Plastic Composites, laminated/side-slotted.	Candidate for broader sheet coverage. Select one actual width, length and joint before pricing; these options do not define a measured full-wall module or guarantee flatness at every substrate.

What changes when a profile is replaced by a sheet

The face rhythm, number of vertical joints, trim engagement, cut-edge treatment and finished build-out may all change. A supplier cannot resolve the substitution by preserving only the wood-look color. The revised section and layout must show which dimension is overall, which repeats after connection and how each edge terminates.

These are public catalog fields read on October 29, 2026. Mixed marketing passages on the pages describe veneer, acoustic effects and broad performance labels; this publication does not use those passages as proof of these models' tested construction or ratings.

A ceiling strip and a relief panel need different details

Public record	What is identified	Purchase consequence
Indoor WPC Ceiling - 50*100 Block Strip [G03]	Listed width 50 mm and height 100 mm; Wood-Plastic Composites; laminated/pressed process. Application field says Screen Wall & Block Decoration.	A dimensional section is not a suspension system. Resolve direction, spacing/pitch, length, end closure, connection and overhead suitability before using the strip in a ceiling design.
PU Flowing Water Shape Stone Panel [G04]	PU type; listed size 600 x 1,200 mm; colors and a glue/nail installation description.	Treat this as an imitation-stone product route, not quarried stone. Resolve actual composition, weight, backing, joint/cut edge and evidence for the intended exposure.

The catalog is a starting point

The strip page also contains broad lamp-support and fire-performance language, and the PU page carries a B1 label. Neither supplies the matched report or engineered attachment record reviewed for this book. A model description may identify what to request; it cannot close those requirements.

Wall approval does not become ceiling approval

Changing orientation changes the consequence and load path of a failed attachment. A wall-profile page or a general installation animation cannot establish a safe overhead support arrangement for a selected model.

Fire reaction and fire resistance answer different questions

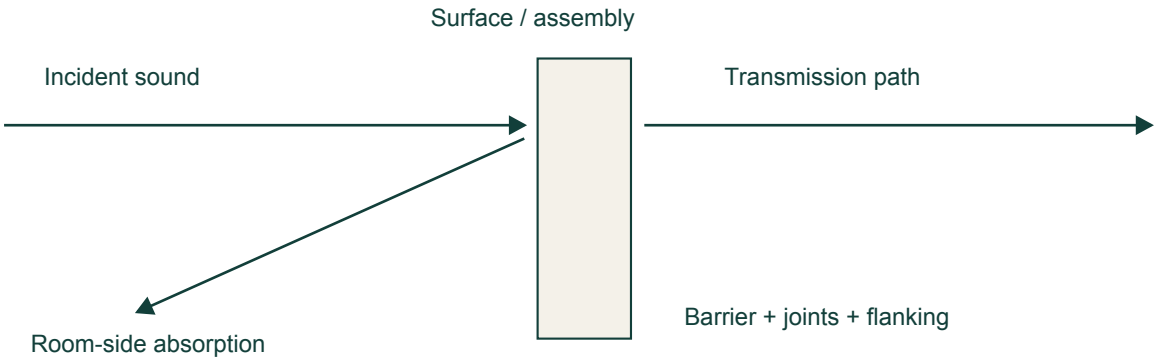
Evidence family	What it addresses	What a buyer must not infer
Surface-burning / reaction-to-fire evidence	Intertek describes ASTM E84 as comparing surface flame spread and smoke behavior under its test exposure. [T01]	A surface result is not an hourly wall/ceiling barrier rating.
Fire-resistance assembly evidence	UL explains that wall/floor/ceiling assemblies are assessed as compartmentation systems and tested to methods such as UL 263/ASTM E119 for an hourly rating. [T02]	An attractive face or one fire-retardant ingredient establishes the complete rated assembly.
Local use/classification requirement	The project specifies the required method, classification, location and applicable edition.	A B1, Class A or other label from one scheme equals a similarly named label in another.

Resolve a misleading proposal

If the project requires a rated wall and an offer supplies only a surface-burning report for the decorative panel, the requirement remains unresolved. Keep the specified barrier design and its penetrations separate from the decorative finish review. Replacing one facing, cavity, adhesive or connection requires review of the actual coverage; a component result cannot be extended to a new assembly by appearance.

The official summaries cited here explain the difference. They do not certify any George Panel or NOVARMIA product, provide a current local code table or reproduce paid standard clauses.

Absorb sound in a room or reduce transmission between rooms



Two paths: reflections return into a room; transmitted sound reaches an adjacent space through the partition or a shared ceiling plenum. No performance value is assigned to this schematic.

Armstrong distinguishes NRC, which describes absorption, from CAC, which addresses sound transmission through a ceiling/common-plenum path. Its technical FAQ also distinguishes a barrier's STC from that two-pass ceiling path. These metrics are different; one does not stand in for another. [T03] [T08]

Brief	Reasoned choice
An echoing open room	Compare applicable absorption evidence and treatment area/location. A decorative rib pattern without that evidence remains a visual proposal.
Speech privacy between enclosed rooms	Review the partition, doors, penetrations and ceiling/plenum path. A high absorption result alone does not close the isolation brief.
A suspended baffle or free-hanging element	Request the applicable test arrangement and reported quantity/metric; do not insert its headline value into an unrelated continuous-ceiling calculation.

Do not add NRC to CAC, average STC values across openings or advertise a percentage of room-noise reduction from panel coverage alone. The room and adjoining paths need a defined acoustic design.

The backing arrangement can change the acoustic proposition

WoodUpp's Akupanel installation-on-formwork guide connects its acoustic class-A claim with mineral wool between the supporting joists and describes the slat/felt joint. This is a manufacturer-specific sound-absorption arrangement; the letter A is not a fire classification. Its instruction cannot be transferred to a plain WPC profile. [T04]

Proposal	Consequence for comparison
Slat/felt panel direct to a wall	Record the tested direct-mount build-up and result, if offered. Do not reuse a cavity-backed result by dropping its cavity from the order.
The same face over battens/insulation	The cavity and backing occupy space, require support and change perimeter/outlet details. Confirm that the evidence matches this arrangement.
Decorative WPC flutes with no acoustic report	Assess their visual use independently. Do not substitute them for the specified acoustic assembly on the strength of a groove photograph.

A resolved substitution decision

Suppose the brief calls for an absorption assembly with a documented backing, while the alternate quote includes only a matching-looking face. The alternate is incomplete. Add and review the missing backing system with applicable evidence, or retain the original proposal. A lower face-only price is not a like-for-like alternative.

Keep any acoustic backing change tied to fire, moisture, support and emissions reviews as well as acoustics. Solving one performance issue does not authorize a conflicting installation layer.

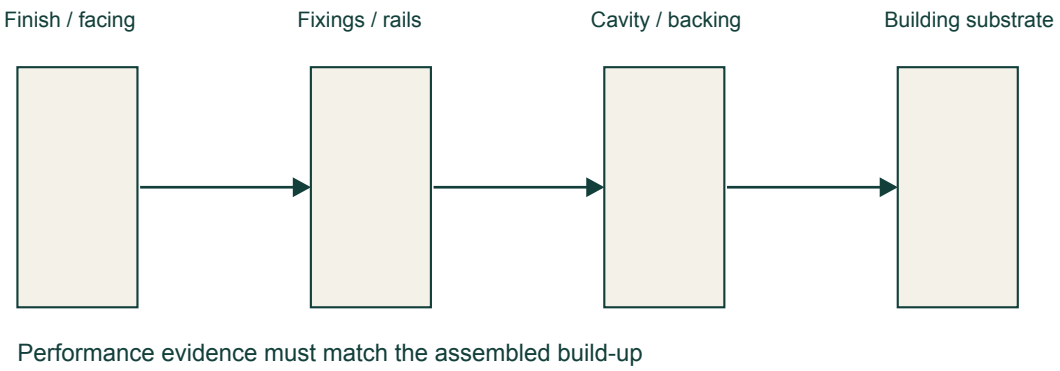
Emissions claims require the actual material and record

EPA identifies hardwood plywood, MDF including thin MDF, and particleboard as the composite-wood product categories covered by its US TSCA Title VI rule. It describes certification and labeling for covered products. A product called composite or bamboo fiber is not classified solely by that marketing name; determine its actual construction and applicable scope. [T06]

Claim in a proposal	What is missing if stated alone
Formaldehyde free	Definition, product identity, test method, result, date and reporting limit; it cannot be read as zero emissions from the complete room.
Low-VOC adhesive	The exact adhesive, use and relevant emissions/content evidence. A panel record does not cover every site adhesive.
A core-board certificate	Traceability to the proposed core/lot and the finished system scope. It does not automatically evaluate coatings, backing or installation products.
A certification logo	Current matching directory/record and product scope, rather than a logo copied from a company page.

Record the actual material identities before requesting compliance evidence. A solid-wood face, composite core, felt, coating and adhesive may have different records. The buyer's useful output is a linked evidence set for the selected build-up, not a new environmental claim invented from a catalog label.

Trace the load path through every installed layer



Decorative face, connection, batten or carrier, fixing and supporting structure are distinct. The schematic assigns no fastener capacity or spacing.

A face panel cannot compensate for an unsuitable backing. Define what receives the fixing, how a batten/carrier attaches to that substrate, and how panel edges and intermediate supports are restrained. Surface paint, an old decorative lining or a hollow cavity cannot be treated as a known structural fixing base without a suitable detail.

Arrangement	Selection consequence
Direct attachment	Preserves more room depth but requires suitable flatness, compatibility and attachment to the actual substrate.
Battens or carriers	Creates a service/leveling zone and a defined fixing pattern, but increases build-out and introduces another set of connections.
Suspension system	Can create an accessible ceiling plane, but needs its own grid, hanger, perimeter and support design.

George Panel's general guide shows support strips, sequential panel fixing and corners. It is useful for recognizing components to coordinate; it is not a model-specific fixing design for GP-KJ187HC or a universal overhead detail. [G05]

Keep fixtures separate

Heavy equipment, cabinetry or other imposed loads need their stated supporting arrangement. Do not assume a decorative panel or unidentified clip can carry them merely because the face accepts a drilled hole.

An overhead ceiling is a system purchase

Armstrong's WoodWorks Concealed instructions identify removable panels supported by hooks on a specified grid, with safety cables. Panels, hooks, screws and cables are separate supplied items. This named system illustrates why the face-panel count alone is not a complete ceiling order. [T05]

Resolve together	Why it changes the order
Panel and carrier interface	Hook/clip geometry, edge type and compatible grid determine how the panel is retained and removed.
Support and perimeter	Loads, attachment base, edge restraint, special exposure and any seismic requirements belong to the responsible design.
Services above and through	Lighting, air terminals, detectors, sprinklers and access points need coordinated positions and supports.
Removal/replacement	The panel must have a practical disengagement route without destroying neighboring finishes or equipment.

Choose between fixed lining and accessible panels

For a ceiling containing equipment requiring periodic access, a permanently bonded face may save visible joints but creates a recurring removal problem. A reviewed removable system is often the more coherent candidate. Where a fixed lining is selected, place adequately sized access openings at the actual service points and price the frames, closures and finishing with the lining.

Do not infer load capacity or a hanger interval from this publication. The required system, support conditions and coordinated details have to be known before components and quantities can be finalized.

Moisture exposure changes the selection before the finish

Environment	Decision
Conditioned dry interior	Compare the selected product's storage, site and in-service conditions; sequence finishing after wet work is ready.
Seasonal humidity or condensation risk	Review the specific system's permitted conditions, substrate moisture and ventilation, rather than accept a generic indoor label.
Direct splash or a wet-room enclosure	The face, joints, penetrations, backing and water-management arrangement need an appropriate complete design.
Exterior/weather exposure	Use a separately reviewed exterior system, including UV/weather, thermal movement, water management, fixings and applicable fire scope.

WoodWorks Concealed is specifically an interior system with conditioned site requirements and dry wet-work prerequisites; the manual does not recommend exterior or sloped installations. Those restrictions belong to that system, not to all wood panels or a different WPC product. [T05]

Why waterproof marketing does not close the wall

Dumawall's FAQ distinguishes its waterproof panels from the joints: for its shower/high-humidity arrangement, it requires silicone at panel/profile and bath/shower-edge connections. That named-system example shows why a face property cannot establish the complete lining's water-management detail. Its product-specific seal or gap instruction is not a WPC default. [T09]

The assembled wall still contains joints, cut edges, service openings and a supporting substrate. Resolve those paths for the selected system. Do not cover a leak or damp substrate and treat the new decorative face as the repair.

Choose the environment first, then the product and attachment arrangement. If the proposed detail cannot establish the needed exposure scope, move the decorative feature to a suitable dry zone or obtain a different reviewed system.

Movement, edges and finish samples belong on the same drawing

Interface	What the drawing must resolve
Start/end and corners	Where the repeat begins; full or cut ribs; closure/trim engagement; exposed cut edges; inside/outside corner appearance.
Butt/end joints	Support, alignment, finish continuity and any selected movement detail. A stock-length shortage cannot be concealed by an undefined seam.
Substrate or building joint	How the lining respects the intended joint instead of inadvertently bridging it with fixed panels.
Batch and direction	Finish sample, visual range, grain/texture orientation and the sequence for matching adjacent faces.

A material or system may move differently from its substrate. The required gap or restraint depends on the actual product, length, support and exposure; there is no universal expansion allowance in this book. Keep those input values in the selected detail, not in an unexplained spreadsheet default.

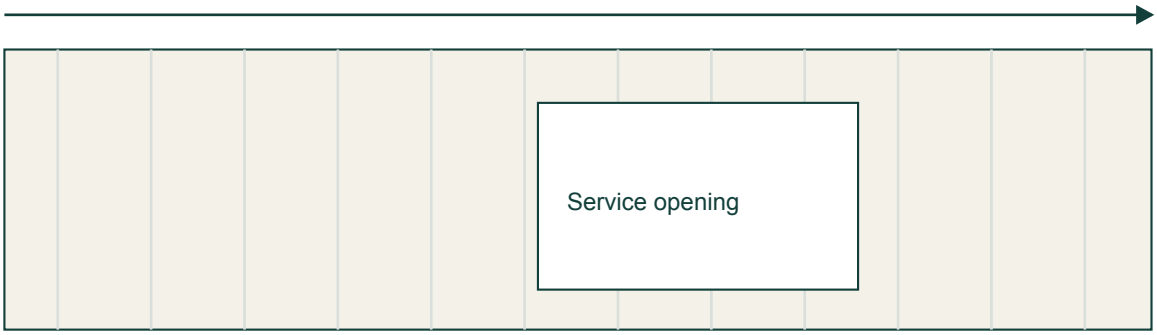
A finish approval has limited scope

Approve appearance against the actual selected sample and documented acceptable variation. That decision does not approve the core, fixing, fire behavior or ceiling system. If the panel section changes while the color stays similar, issue a configuration revision and reconsider all affected records.

A useful mock-up resolves a junction

A corner beside an outlet and access door can test repeat alignment, cut-edge finish and removal. A small flat swatch can establish color/texture only; it cannot demonstrate those interfaces.

Place access doors before calculating a continuous repeat



Opening trims, closure cuts and removable zones need separate pieces

An access opening interrupts the repeat. Preserve the actual service route, supporting frame and removable boundary; a decorative seam is not automatically an access door.

Locate valves, drivers, controls, cleanouts and other service points on the coordinated elevation. Define the access door's clear opening and removal/swing path from the equipment requirement. A drawing that shows only the closed flush face leaves the maintenance problem unresolved.

Two viable arrangements

Arrangement	Tradeoff
Independent access frame with finish infill	Makes the removable boundary explicit. Coordinate the frame reveal, edge support and the repeat across that boundary.
Reviewed removable panel module	Can align access with the panel grid. Its actual release path and retaining system must remain reachable after neighboring work.

If a service opening falls through three decorative ribs, shifting the repeat may produce a cleaner closure; moving the actual service device is a separate design decision. Neither option can be decided by deducting the access-door area from total wall area.

WoodWorks Concealed provides an example of downward-accessible panels and a removal procedure. That feature belongs to its specified system; it is not a property of any panel hung over a void. [T05]

Check room clearance and protruding objects separately

A continuous lining changes the available room dimension. A local deep rib, trim, control or projecting fixture may create an additional circulation hazard. Treat the two checks separately instead of assuming that a wall with sufficient floor area has no projection problem.

Teaching width check

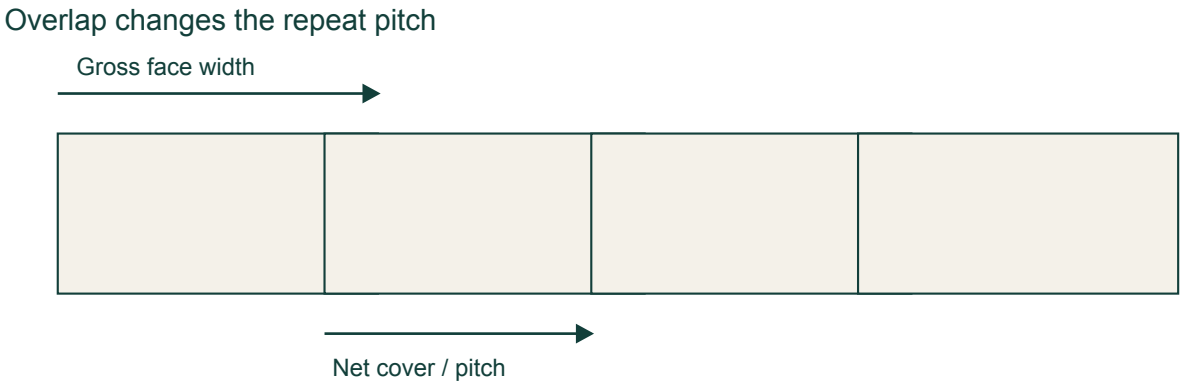
Assume a corridor has 1,200 mm between the surveyed bases. The proposed finished build-out is 50 mm on each side. Remaining width = 1,200 - 50 - 50 = 1,100 mm. Against an assumed project requirement of 1,150 mm, it is short by 50 mm. These are teaching inputs, not a code minimum or a panel thickness specification.

Resolve the conflict

Reduce one or both build-outs, move the feature to a different zone, revise the room arrangement or have the responsible team resolve the requirement. A shallower fixing system is only a candidate after checking substrate, services and performance coverage; changing the face thickness alone may not recover the full dimension.

Within its applicable US scope, the Access Board's ADA guide addresses wall-mounted objects projecting into circulation paths. Its leading-edge-height and projection rules are distinct from minimum route width. Apply the actual rule and measurement conditions to localized features; this publication does not determine a globally compliant corridor layout. [T07]

Gross face width and net installed coverage are different



The product face can overlap or engage the adjacent joint. Net installed repeat controls the width calculation; starter/closure rules need a selected detail.

For connected profiles, the listed product width may include a tongue, slot, overlap or edge that does not repeat as visible installed coverage. Obtain the actual engaged joint or approved net module. For open strips, the designed center spacing/pitch is a layout input; the open gap is not filled panel area.

Do not double-count the joint

If a supplier gives net installed coverage after joint engagement, divide the required width by that net value. Do not subtract the overlap a second time. If the first and last modules follow different rules, use the actual layout rather than forcing one repeat formula.

George Panel lists 187 mm for GP-KJ187HC but does not label it effective installed coverage in the reviewed feature table. The public width can identify a candidate profile; it cannot populate the workbook's Net cover field as a verified net value. [G01]

What the simple calculator assumes

Every module is counted at the entered net repeat over the required run, with the stated start/end gaps. No special starter-width benefit, miter loss or offcut reuse is automatically credited.

Worked run count: the wrong width omits one module

Teaching values only

Assume gross profile width 187 mm and independently confirmed net repeat 177 mm for this fictional layout. The 177 mm value is not a measurement or specification for GP-KJ187HC. All gaps below are assumed project inputs.

Calculation	Result
Required width = 3,600 - 12 start gap - 12 end gap	3,576 mm
Correct count = CEILING(3,576 / 177)	21 modules
Incorrect use of gross width = CEILING(3,576 / 187)	20 modules
Coverage from those 20 modules = 20 x 177	3,540 mm; short by 36 mm
Coverage from 21 modules = 21 x 177	3,717 mm; terminal layout/cut to resolve

The conclusion is a count difference, not a prescribed 141 mm waste strip. The end detail determines whether the final module is cut, how its edge is retained and whether the visible pattern remains acceptable. Verify that closure before releasing the cutting list.

Apply repeat count before pack rounding

For two identical runs, base pieces = 21 x 2 = 42. Add two explicitly chosen spare pieces: 44 required pieces. At an assumed six pieces per pack, order CEILING(44 / 6) = 8 packs, or 48 pieces. The four-piece pack overage is separate from the two selected spares; do not add another unrecorded waste percentage.

Length, openings and offcuts need an actual cut plan

A width count does not establish stock length. GP-KJ187HC lists a 3,000 mm length. For a teaching full-height run needing 3,100 mm pieces, that listed length is 100 mm short. More width modules cannot solve the height conflict. Obtain a suitable length/product or design and approve a supported end-joint arrangement. [G01]

Question	Resolved reasoning
Can a doorway simply be deducted from wall area?	Net face area may fall, but the doorway creates returns, jamb/head edges and cut pieces. A deduction cannot by itself identify how many full stock pieces remain necessary.
Can an offcut serve another zone?	Only if length, width, pattern direction, finish batch and usable edges meet that second piece's need. Keep that assignment in the cutting plan.
Can all remnants count as spares?	A narrow or short remnant may not replace a damaged full panel. Define actual spare-piece sizes and quantities.

A bounded stock-cut example

Assume 3,000 mm stock, two required pieces of 1,400 mm and a 3 mm saw kerf for each cut. Two pieces consume 2 x 1,400 + 2 x 3 = 2,806 mm, leaving 194 mm under this cutting arrangement. That remainder is not a third 1,400 mm piece. This illustrates a cut plan; the workbook does not perform cutting optimization.

Agree grain direction, end treatment, joint position and any keep-out areas before nesting pieces. Order quantities should be revised when the layout or an opening moves, even when total net wall area is unchanged.

Open strips use pitch; finished area is another quantity

Teaching strip layout

Assume a 1,000 mm zone with 20 mm start and end gaps. Use 40 mm-wide strips and a selected 20 mm clear gap. With no special edge cuts, width for n strips is n x 40 + (n - 1) x 20.

For 16 strips: 16 x 40 + 15 x 20 = 940 mm, within the 960 mm available. Seventeen strips need 17 x 40 + 16 x 20 = 1,000 mm, which exceeds it by 40 mm. The 16-strip arrangement leaves 20 mm to distribute through an approved edge or spacing adjustment; it is not an automatic instruction to change every gap.

Why a coverage calculator is not a strip designer

A connected-panel net repeat and an open-strip pitch do not share the same first/last-member rule. The companion Coverage tool counts repeated covering modules; use a separate reviewed strip-layout drawing for this example. Do not enter the 50 x 100 mm catalog section as though either dimension were a verified ceiling pitch. [G03]

Quantity	Keep its meaning
Pieces / packs	Physical supply and receipt count.
Net covered face area	Area under the agreed layout; exclude gaps only according to the stated basis.
Linear trim length	Perimeter, openings and junction lengths, with stock joins/cuts separately identified.
Visible strip area	Not the same as plan area of an open ceiling, or a tested acoustic quantity.

Compare quotations at the full-system boundary

Scope to align	What belongs in the comparison
Product and finish	Selected model/section, substrate/core, facing, direction, finish sample and variation basis.
Quantity and units	Same zones/revisions, net repeat, cut lengths, physical pieces/packs, trims and explicit spares.
Supporting system	Battens, grid, carriers, clips, hooks, fixings, backing and access frames actually included.
Site and delivery	Preparation, installation, inspection scope, packing, freight/named place, unloading and damage responsibility.
Commercial basis	Currency, chargeable area/length, minimum charges, validity, payment, sample/tooling and agreed schedule.

An actual normalization operation

Suppose A prices panel faces only, while B includes faces, carriers, closures and access frames. Comparable A = Q_A + confirmed carriers + confirmed closures + confirmed access frames, plus any other required unequal scope. Comparable B = Q_B only after all other bases align. Unpriced supplements leave A unresolved, not zero.

Do not compare a gross square-meter rate with a net installed-area total, or a pack rate with an each-price, without the actual quantity basis. A lower raw figure does not establish a saving if its supporting and serviceable system is missing.

The workbook is not a price database

Use its approved quantity basis with the written quotations. Its current scope is zone/coverage/receipt control; quotation normalization is performed in the recorded external comparison, not automatically calculated by this workbook.

A revision must reach the layout, evidence and order

Teaching revision	Required consequence
Net repeat changes from assumed 177 to 172 mm	Recalculate the run. For 3,576 mm, CEILING(3,576/172) = 21 still, but terminal geometry changes from 3,717 to 3,612 mm. Same piece count does not mean the same cut or closing detail.
Cavity or acoustic backing is removed	Revisit acoustic evidence and changed build-out, fixing, edges and service locations. A finish sample cannot approve the change.
Fixed panel becomes a service door infill	Revise the removable boundary, frame, edge support, latch/release and service route, not only the panel count.
Wall proposal becomes overhead ceiling	Require the orientation-specific system and support/evidence review. Do not carry a wall approval forward unchanged.

Record the current zone revision once, preserve superseded drawings and identify the affected runs and order lines. Evidence, sample and scope reviews need their own record IDs, person, date and basis. A Recorded status means the decision has been entered, not that the spreadsheet has judged the engineering.

Commercial impact follows the same change

A new joint, access frame or support component may change price, lead-time basis and packing as well as appearance. Obtain a written revised quotation or confirmed no-change result. No universal revision fee, production time or free rework policy is implied here.

Inspect the system before concealing it

Stage	Record the observable result
Receipt	Zone/order line, current revision, model/section, finish/lot, piece count, lengths and visible damage against the actual order.
Before lining	Prepared substrate, backing/support, service positions, relevant moisture/site conditions and the actual coordinated detail.
Trial layout	Repeat, terminal cuts, corners, samples/visual range, access and outlet fit. Resolve the junctions before repeating them across the room.
After installation	Alignment and joints, retained edges, actual access/removal, finish condition and outstanding deviations under the agreed inspection basis.

Keep photographs and measurements tied to a location and revision. A hidden fixing photograph is useful only if it identifies what was installed and where; a generic factory or showroom picture cannot replace it. Agree inspection extent and acceptance conditions before work rather than invent a scratch limit or sampling rate during receipt.

Separate physical arrival from acceptable condition

For a teaching order of 48 pieces, events of 30 and 18 give 48 received. If three of the second event are unacceptable and not resolved, only 45 are accepted. A matching physical total cannot close that condition. Keep the disposition and any replacement arrival traceable instead of changing a status word to remove the shortfall.

Protect and store the supplied material under its actual manufacturer instructions. Match batches for each visible zone and retain agreed replacement pieces. Exposure, cleaning and repainting restrictions belong to the selected product, not a generic panel label.

Zone Schedule: identity and review records

The companion workbook has three worksheets with six work areas, each providing 50 input rows. It tracks zones, width-only module quantities and physical piece receipts. Drawings, evidence, cut plans and quotations remain actual referenced records.

Work area / header row	What to enter
Zone Schedule / 7	Zone ID, location, Wall/Ceiling application, system/product reference, current revision, requirement, layout/direction, technical evidence and sample/finish reference.
Zone Schedule / 67	Review ID, Zone ID, revision, Evidence/Sample/Scope review type, Recorded/Hold decision, reviewer, date and actual record reference.

Keep the review tied to what was selected

Create one zone record for a defined build-up and one review record for each relevant scope. Store the selected evidence and any unresolved conditions in the referenced record. Recorded means a human decision has been entered; it is not a fire, acoustic, structural or emissions certification.

When the current zone revision changes, renew affected reviews and references. A previous approval should not silently attach to a different panel, cavity or fixing. Avoid duplicate Zone IDs and competing active revisions; archive superseded source documents rather than changing IDs to hide the history.

Usable scope

Use one measurement unit for each coverage run and explicit piece counts for order/receipt. No catalog net width, movement gap, fixing interval, price or test result is supplied by default.

Coverage: calculate the width run, then round the pack

Work area / header row	What it contains
Coverage / 7	Run ID, Zone ID/revision, mm or in, run width, independent start/end gaps, net cover and gross width.
Coverage / 67	Same Run ID, identical-run count, explicit spare pieces, pieces per pack and cut-plan reference. Results: required width, modules/run, base pieces, pack count and order pieces.

Enter net cover only after the actual joint/repeat has been established. The tool subtracts the start and end gaps once, then rounds required width divided by net cover up to a whole module count. Gross width is contextual; it is not silently substituted for net cover or used to deduct overlap again.

Reproduce the teaching calculation

Run 3,600, start 12, end 12 and net 177 mm produce 3,576 required and 21 modules. Two identical runs give 42 base pieces; two spares give 44 required. Six pieces per pack produce eight packs and 48 order pieces. Keep the actual cut plan linked and confirm selected lengths independently.

The formula is width-only for continuous butt-jointed or overlapping panels with net cover no greater than gross width. Open-joint strips need a separate pitch and edge setting-out schedule. It does not optimize cutting, deduct openings, design open-strip spacing or prove that panel length suits the zone height. Treat nonidentical runs as separate records. Before extending beyond 50 rows, review formulas, validation and linked ranges.

Receipt: retain each arrival and its accepted quantity

Work area / header row	Actual workflow
Receipt / 7	Order Line ID, Zone ID/revision, item and PO references, ordered piece quantity and final-delivery declaration; received/accepted/outstanding totals are linked to events.
Receipt / 67	Unique event ID, Order Line ID/revision, date, received and accepted piece counts, damage/exclusion reference or None, inspection reference, reviewer/date and state.

Append one event for each physical arrival under the correct order line and revision. Do not duplicate an event ID or overwrite prior arrivals. Keep accepted quantity no greater than received for the event; record damaged/excluded pieces and the real disposition separately.

Use the shortage result honestly

For 48 ordered, events of 30 received/30 accepted and 18 received/15 accepted yield 48 received and 45 accepted. The unresolved three-piece difference remains visible. A final-delivery declaration cannot turn it into three acceptable pieces. Record the actual resolution and any new physical arrival with unique references.

The tool counts pieces; it is not a complete return, refund, pack-allocation or contract-concession system. Keep those documents externally linked and avoid double-counting a replacement. Receipt completeness does not certify installation, acoustic performance, fire behavior or safe ceiling support.

Working glossary

Term	Meaning in this book
Face / substrate / assembly	Visible layer / supporting or core material / all coordinated layers and connections.
Gross width / net cover	Listed or measured overall profile width / installed repeat after the selected joint geometry.
Pitch / clear gap	Distance between repeated strip reference points / open space between visible strips.
Zone / run	Defined installation area with a common basis / a particular width sequence within it.
NRC / CAC / STC	Absorption / ceiling-plenum transmission classification / barrier-transmission classification. They answer different questions.
Reaction / resistance	Response of a surface/product under a fire exposure / performance of a rated building assembly under its test.
Cut plan / spare / pack overage	Assignment of stock to pieces / explicit replacement allowance / extra pieces caused by pack rounding.
Recorded review	An actual human decision reference with scope and revision; not automatic technical approval.
Received / accepted	Physical pieces that arrived / pieces acceptable under the recorded condition review.

Sources and scope notes

[G01] George Panel - Indoor WPC Wall Panel GP-KJ187HC

https://www.georgepanel.com/product-item/indoor-wpc-wall-panel-gp-kj187hc/

187 x 3000 x 30 mm listed dimensions; material/process and background-wall identity. Net cover, interior geometry and tested performance are not established; mixed generic marketing not adopted.

[G02] George Panel - Indoor WPC Wall Panel - GP-KJ-W

https://www.georgepanel.com/product-item/hollow-wall-panel/

Named width/length options, thickness and WPC/bamboo-fiber material/process fields. Options do not establish installed module; generic veneer/acoustic claims not adopted.

[G03] George Panel - Indoor WPC Ceiling - 50*100 Block Strip

https://www.georgepanel.com/product-item/50100-block-strip/

Listed 50mm width/100mm height and WPC material; stated Screen Wall & Block Decoration application. No length, pitch, mounting load, overhead approval or performance report established.

[G04] George Panel - PU Flowing Water Shape Stone Panel

https://www.georgepanel.com/product-item/pu-flowing-water-shape-stone-panel/

PU imitation-stone identity and listed 600x1200mm size. Broad fire/water/exterior labels lack matched evidence in this research and are not adopted.

[G05] George Panel - Installation Guide

https://www.georgepanel.com/installation-guide/

General component sequence: support, sequential fixing and matching trim. Not a GP-KJ187HC-specific approved detail. No generic spacing, fastener or ceiling approval transferred.

[T01] Intertek - ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials

https://www.intertek.com/building/standards/astm-e84/

Public laboratory explanation of surface flame/smoke test and sample arrangement. Explanatory page, not paid standard text, local adoption or NOVARMIA product result; no numeric class thresholds adopted.

[T02] UL Solutions - Fire Resistance Products, Systems and Designs

https://www.ul.com/services/fire-resistance-products-systems-and-designs

Assembly fire-resistance purpose, hourly method family and need to follow design criteria. No actual assembly listing or product certification verified for NOVARMIA.

[T03] Armstrong Ceiling Solutions - Total Acoustics: The Ideal Combination of NRC and CAC

https://www.armstrongceilings.com/commercial/en/performance/total-acoustics.html

Distinguishes absorption and sound blocking through a common ceiling plenum. Manufacturer education; marketing tier numbers are not project defaults or NOVARMIA ratings.

[T04] WoodUpp - Akupanel: Installation on formwork

https://woodupp.com/pages/installation-guide/akupanel-installation-on-formwork

Named slat/felt system ties acoustic class-A claim to backing/mounting arrangement. Acoustic class is not fire class. No screw size, spacing, gap or performance claim transferred to another product.

[T05] Armstrong Ceiling Solutions - WoodWorks Concealed: Assembly and Installation Instructions

https://www.armstrongceilings.com/content/dam/armstrongceilings/commercial/north-america/installation-and-maintenance/woodworks-concealed-installation.pdf

Specific grid/hooks/safety cables, downward access and conditioned interior limitations. System-specific; no capacity, fastener interval, climatic default or rated assembly transferred to NOVARMIA.

[T06] US Environmental Protection Agency - Frequent Questions for Consumers about the Formaldehyde Standards for Composite Wood Products Act

https://www.epa.gov/formaldehyde/frequent-questions-consumers-about-formaldehyde-standards-composite-wood-products-act

Covered composite-wood categories and labeling/certification framework. Actual construction and applicable latest rule must be established; no material certificate or emissions result verified.

[T07] US Access Board - Guide to ADA Standards: Chapter3 Protruding Objects

https://www.access-board.gov/ada/guides/chapter-3-protruding-objects/

Circulation-path projection rules are distinct from route-width checks. Bounded US guidance, not a worldwide layout approval or an automatic rule for every continuous lining.

[T09] Dumawall - Frequently asked questions

https://www.dumawall.com/en/frequently-asked-questions

Manufacturer distinguishes waterproof panels from its required wet-zone joint treatment. Named product-specific instruction, not a general WPC wet-area approval or universal joint detail.

[T08] Armstrong Ceiling Solutions - Ceiling Performance FAQs

https://www.armstrongceilings.com/commercial/en/technical-downloads/ceiling-performance-faqs.html

Distinguishes absorption, ceiling-plenum and single-pass barrier classifications; surface burning vs hourly resistance. Public educational definitions; no claimed rating or independent room prediction.

Photo credits and evidence scope



GEORGE Group China: a material-review discussion from the official sales-service imagery. No project identity, approval or panel test is inferred.

Cover: GeorgeBuild, material-selection discussion in its official exhibition gallery. Source: https://www.georgebuild.com/about-us/

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