Bathroom Fixtures and Sanitary Ware Procurement

Basin and faucet pairing, toilet connections, concealed showers, baths, destination evidence and room interfaces for residential and hospitality projects.



Official George Group Foshan sanitary showroom. The display is not a customer installation, test result or current stock record.

NOVARMIA White Paper Series | Production 06 | Series reference WP-04

English edition 1.0 | October 2026

The governing decision

Buy compatible fixture assemblies for a defined installation. Matching color and style cannot resolve drainage, mounting, concealed bodies, water service or destination requirements.

Six linked decisions in a bathroom package

Decision	What changes the purchase
Destination and use	Private residence, guest room and public lavatory can have different applicable requirements and product-label scope.
Fixture and paired parts	Basin/faucet/drain, bowl/carrier/actuator, shower body/trim/outlets and bath/waste are connected selections.
Finished installation geometry	Wall/floor build-ups, cutouts, holes, mounting positions, clearances and maintenance access.
Water, drainage and power	The actual site conditions and product requirements, reviewed by the responsible local trades/designers.
Evidence and finish	Current market variant, named test/certification scope, actual samples and compatible care.
Commercial and physical scope	Quantities, included fittings, installation responsibilities, packing and acceptable receipt.

This guide serves project owners, designers, contractors and procurement teams selecting bathroom fixtures and coordinated sanitary packages. It uses public primary sources and original teaching calculations. It does not supply a plumbing design, waterproofing specification, electrical design, accessibility approval or laboratory result.

NOVARMIA is a new brand within GEORGE Group. Named group model records retain their original attribution; they do not become new NOVARMIA certifications or universal supply specifications. Order entities, final configurations and responsibilities remain those in the actual project documents. U.S. examples are identified as regional examples.

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06	Use the editable fixture, scalar-interface and receipt records
Reference	Working terms, sources and photograph credits

Keep the identities separate

A Fixture ID identifies the project item or scheduled configuration; a manufacturer model identifies the product; a paired-component reference identifies the other required part; a revision identifies the current installation basis. A basin code without its faucet, waste and vanity detail is an incomplete purchasing record.

Four actual George Bathroom model records

Public model record	Parameters actually published	What remains unresolved
X066 toilet [G01]	690 × 410 × 830 mm; one-piece, floor mounted, washdown; ceramic + PP cover; page lists S-trap 250 mm / P-trap 180 mm.	Confirm the selected outlet variant and its drawing/datum. The slash is not proof that one delivered unit fits both arrangements.
S2103 basin series [G02]	Above-counter, one-piece ceramic; named color options.	Selected member/dimensions, mounting hole, overflow, drain, actual finish and compatible faucet geometry are not settled by the series name.
KSH-2602/B/G/Q basin faucet [G03]	Brass; installation on basin/top.	Selected finish/variant, reach, height, hole, deck/clamping limit, supplies and destination evidence.
OMQ-91724 bath [G04]	Acrylic freestanding bath; published size 1,700 × 800 × 600 mm.	Current ordered variant, support/drain detail, access, included fittings and actual installation requirements.

These are genuine public model references, not this project’s approved schedule or stock confirmation. None of the entries above proves WaterSense status, an accessibility layout, electrical approval, pressure range or a tested load. Broad water-saving, splash-free and durability descriptions are not adopted as measured performance.

Do not transplant a connection

The X066 page’s own S/P-trap dimensions are not TOTO rough-in dimensions or a Geberit carrier detail. Use the exact selected model’s installation drawing and actual finished datums.

Choose the basin installation with the vanity and user

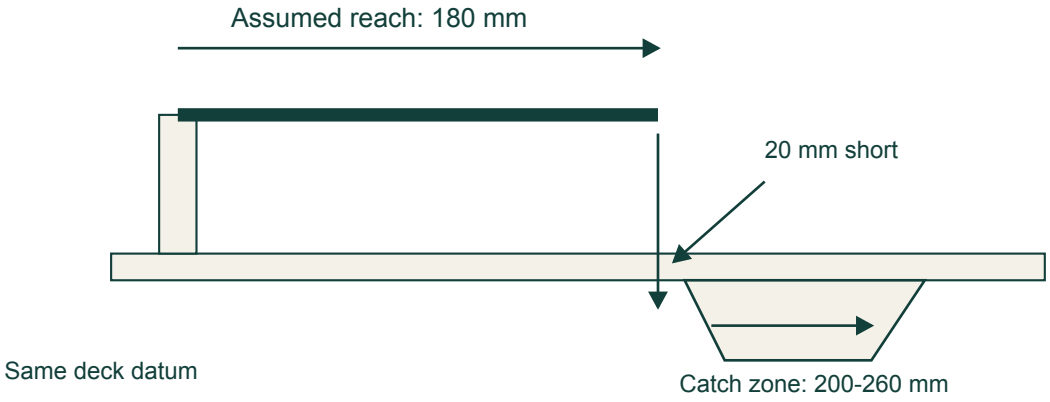
Alternative	Reason to consider it	Tradeoff to resolve
Above-counter vessel	The visible bowl is part of the design and the selected deck/vanity can support its installation.	Bowl height changes the working rim and faucet relationship; clean around the base and resolve the actual drain/cutout.
Undermount basin	The brief favors a continuous counter edge over the bowl.	The actual template, countertop fabrication/support, attachment and service/removal route must agree.
Integrated basin/top	A coordinated top and bowl suit the intended material and appearance.	Confirm the specific material, repair/care route, cabinet support, transport and replacement scope.
Wall-hung basin	The room needs a wall-supported fixture with the intended approach space.	Wall/support detail, exposed/protected services, fixing and maintenance are part of the selection.

Material and installation type are different decisions. S2103 is a published ceramic above-counter route; OMQ-91724 is an acrylic bath, not a ceramic-basin specification. An artificial-stone or solid-surface name needs its own actual composition, manufacturer and care documentation rather than inherited properties from another fixture. [G02] [G04]

Resolve a height conflict

Adding a vessel basin on top of an unchanged vanity raises the rim relative to that vanity. If the desired rim position or approach is fixed, revise the cabinet/top arrangement or choose a different basin installation. Buying a taller faucet alone does not resolve the overall basin height or knee-space requirements.

Pair a basin and faucet by geometry and function



Illustrative reach and catch-zone relationship. Hole fit, overflow/drain and vertical hand space are separate checks; this is not a tested GEORGE combination.

Interface	Useful evidence
Reach and outlet direction	A common-datum section locating outlet/stream relative to the actual bowl; functional evaluation of splash and usable space.
Outlet height	Distance to the rim/bowl and hand space for the actual pair, not the faucet's total height alone.
Hole and mounting	Hole count/diameter, deck thickness and clamping/handle clearance; rear access for fastening and servicing.
Supply and operation	Connection details, required site conditions, handle movement and any intended accessibility requirements.

Hansgrohe's ComfortZone method evaluates faucet/sink combinations for free space and splash behavior, including use testing. It also says actual site space, connections and water pressure still need assessment. This supports checking the pair as a system; it does not certify a George basin paired with a visually similar faucet. [T05]

A resolved alternative

If the chosen outlet misses the usable bowl area, compare a different reach, a revised faucet/basin position or another basin. Recheck hole/edge and vertical relationships after any move. An attractive elevation without these interfaces is not a completed pairing decision.

Teaching reach check: a positive margin is only one condition

All values on this page are assumed millimeters, not product parameters. Use one deck datum and a simplified vertical outlet projection. The project’s declared acceptable horizontal catch zone runs from 200 to 260. Candidate A projects to 180; candidate B projects to 230.

Scalar check	Candidate A:180	Candidate B:230
Minimum 200: available − minimum	180 − 200 = −20	230 − 200 = +30
Maximum 260: maximum − available	260 − 180 = +80	260 − 230 = +30
Horizontal conclusion	Fails the assumed lower bound by 20	Inside both assumed horizontal limits

Candidate A’s positive maximum margin does not cancel its negative minimum margin. Reject this assumed reach arrangement or change the pair/position and review again. Candidate B satisfies this horizontal exercise only. It still needs outlet angle, height, bowl shape, actual operating conditions and splash evaluation.

The datum must match

A catalog reach measured from a faucet centerline cannot be compared directly with a bowl dimension measured from the finished wall. First establish the actual offset between those datums in the coordinated drawing. The workbook compares entered scalar limits; it neither projects an angled water stream nor infers a catch zone.

How the toolkit represents a range

Use two Interface Review rows: one Minimum 200 and one Maximum 260, both tied to the same fixture, pair and current drawing. There is no automatic combined basin/faucet approval.

Overflow, drain and drawer space must agree

Selection	Decision to close
Basin with/without overflow	Identify the actual overflow path and the waste design the basin manufacturer requires. A visible hole or style name is insufficient.
Waste body and seal	Match flange/seat, connection, assembly thickness and actual installation detail; identify any supplied stopper or control.
Trap and local connection	Coordinate the selected parts and destination plumbing requirements with the responsible installer. A familiar nominal name does not prove every thread/seal fits.
Vanity drawers and access	Show waste/trap/supply envelopes, drawer backs, shutoff access and the intended service/removal route.
Countertop and fixing	Use the actual template, cutout, edge clearance, fastening and support detail for the selected installation.

Kohler K-33151 is explicitly a clicker drain without overflow; the current US/Canada specification identifies its connection and drawing. That named scope illustrates why a clicker description alone cannot select the waste. It does not establish that K-33151 fits S2103 or any other George basin. [T06]

Resolve the vanity conflict before production

If a trap intersects a drawer, the choices include a revised drawer, a different coordinated waste arrangement or a changed fixture position. The plumber’s actual drain design and the cabinet drawing must agree. Do not remove required trap/service features merely to make a drawer close.

Compare floor-mounted and wall-hung toilet assemblies

Alternative	Potential reason to choose it	Scope that remains
Floor-mounted, visible tank	The selected drainage and installation suit the site, with the tank/valve service route visible.	Bowl/tank pairing, outlet and finished rough-in, supply stop, seat/cover and required accessories.
Floor-mounted, concealed or integrated form	The design wants a reduced visible tank profile or a particular smart configuration.	Actual cistern/flush arrangement, access and any electrical service; appearance does not identify the flushing technology.
Wall-hung bowl with concealed carrier/tank	The layout and structural support design accommodate a suspended fixture and its concealed system.	Compatible bowl/carrier/tank/actuator, outlet and fixing geometry, framing/anchors, finish layers and service access.

One-piece versus two-piece, floor-mounted versus wall-hung, washdown versus siphonic and gravity versus another flushing arrangement describe different aspects. Do not treat any one label as a substitute for the complete product and installation specification.

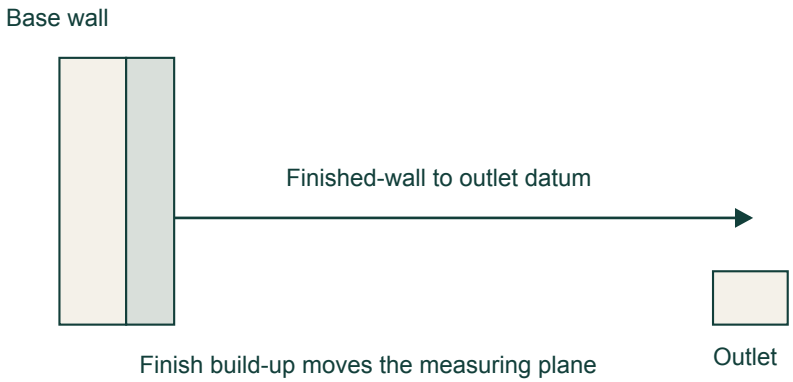
Include the parts that complete the fixture

Specify seat shape, hinge/fixing pattern, cover clearance, tank/carrier and flush control, seals/connectors, supplied hardware and installation instructions. The reviewed TOTO manual lists a seat and other installation items among additional items not supplied; this is an example of why a toilet quote needs an explicit contents list. [T07]

No universal replacement

A different bowl with a similar silhouette is not an interchangeable replacement until the actual outlet, fixings, tank/carrier, seat and evidence are reconciled.

Teaching finished-wall stack: find the missing 15 mm



Schematic reference chain: unfinished wall, finished wall and outlet/flange centerline. The teaching stack below is assumed; the exact selected model determines its own required datum and permitted range.

Assumed teaching inputs: the outlet centerline is 305 mm from an unfinished wall datum. The finish build-up toward that outlet is 20 mm. The available distance from the finished face is 305 − 20 =285 mm. The teaching requirement is explicitly an assumed minimum 300 mm; margin =285 − 300 =−15 mm.

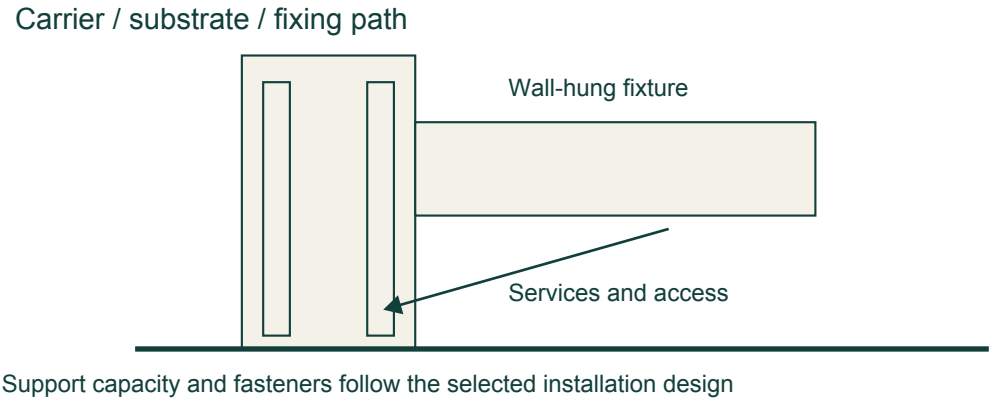
Interpretation	Result
Using unfinished 305 against minimum 300	An apparent+5 mm hides the finish thickness and uses the wrong datum.
Using finished 285 against minimum 300	A 15 mm shortfall is exposed. Hold the assumed selection/site interface.
A nominal or bounded actual model requirement	Use the manufacturer’s exact target/range and datum; do not assume any larger distance is automatically acceptable.

The TOTO CST775/776/785/786 manual defines its rough-in from finished wall to closet-flange center and distinguishes a 10-inch variant from other models. This confirms the importance of the finished datum and exact suffix. Its dimensions are not the X066 S/P-trap values or a global toilet requirement. [T07]

Resolve, then reissue

A different verified model/variant or a revised site set-out may solve the conflict. The responsible designer/installer must decide the actual correction. The worksheet records an assumed minimum comparison; it does not approve an offset connector or alter the drainage.

A wall-hung bowl needs a compatible carrier and support path



Illustrative support path from bowl/fixings through carrier to the building structure. No load, anchor, stud, wall thickness or structural capacity is specified.

Geberit's named Duofix 2x4/Sigma product page separates the carrier/tank package from the compatible wall-hung bowl and separately ordered actuator. It directs the installer to the relevant instructions for construction and water/drainage/venting requirements. This is a system-specific example, not a statement that any carrier fits any bowl. [T08]

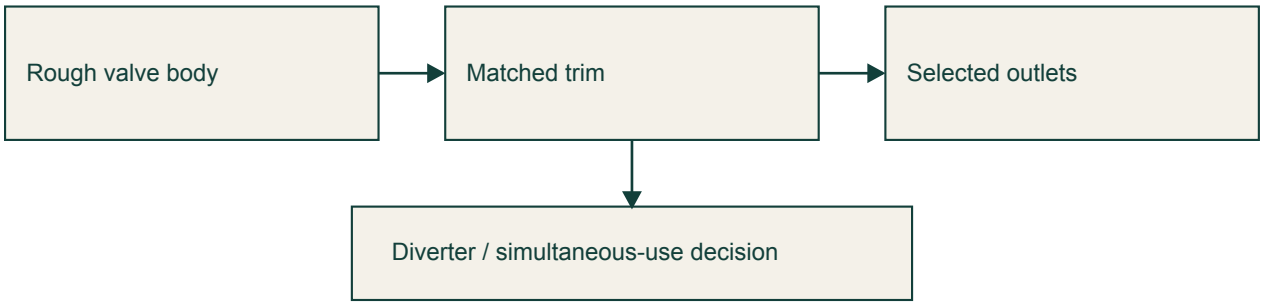
Coordinated item	Decision
Bowl and carrier/tank	Actual compatibility, inlet/outlet and fixing geometry, flush arrangement and market variant.
Structure and anchors	The responsible project detail for the actual supporting floor/wall/framing; decorative boards are not a support design.
Finish and set-out	Finished floor, bowl position, wall build-up, actuator position and connection lengths per the exact system.
Service opening	The actual route to valves, controls and replaceable components; finish work must preserve required access.
Evidence scope	Mechanical compatibility, water-efficiency listing and installed accessibility are separate decisions.

Resolved purchase boundary

Quote the compatible assembly and installation responsibilities together. A low bowl-only amount cannot be compared with an offer that includes carrier, tank, flush plate and the required fittings.

Pair the concealed shower body with its named trim

Match model, generation, connection and operating conditions



Concealed body, matched trim, any diverter and selected outlets form one system. The diagram does not imply that every outlet can run together.

Delta’s reviewed R10000/Saylor specification pairs the named rough family with MultiChoice trim, notes that the cartridge comes with trim and identifies shower-only HF variants with no tub outlet. The Saylor page identifies R10000 compatibility. Universal in this context does not mean cross-brand compatibility. [T03]

Part	What must be specified
Mixing body and cartridge/control	Actual model/variant, control function, connection type, installation depth and the applicable instructions.
Trim and finish	Exact compatible series, finish suffix, handle function and any required extension components.
Diverter/transfer function	Which outlets can be selected, which may run together and which controls are needed.
Showerhead, handshower and tub outlet	Actual models, routing, wall connections, hoses/holders and permitted combinations.

The same Delta document gives stated flow conditions and limits some claims to particular components/variants. Its test-cap pressure numbers are not normal operating requirements. This book transfers none of those values to a George shower or to site supply design. [T03]

Resolve the hidden purchase

A trim photograph is not a complete shower offer. Identify the concealed body and cartridge in the bill of materials before the wall is closed.

Choose the outlet functions before reviewing supply capacity

Configuration	Purchasing consequence
One selected outlet at a time	Define which head/handshower is active in each control position and the actual corresponding evidence.
Two or more simultaneous outlets	Confirm that the selected valve/diverter permits that mode and obtain the project’s supply/drainage review for that actual demand.
Tub spout plus shower	A shower-only body without a tub outlet cannot be assumed to provide the tub connection.
Pressure-balancing or thermostatic selection	Use the actual product function and local temperature-control requirements. The words are not interchangeable certification claims.

A flow rate belongs to a stated product and test/operating condition. Static pressure at an unused supply is not the same record as available pressure while the intended outlets run. The responsible plumbing designer/installer needs the actual hot/cold supply, pressure conditions, pipe arrangement, heater capacity and selected operating modes.

A resolved mode conflict

If the brief requires overhead and handshower together but the offered selector permits either one alone, the offer does not meet the brief. Change the permitted operating mode or select a documented compatible control arrangement, then recheck the site requirements. A larger-looking showerhead does not fix the selector.

No hydraulic calculator supplied

The workbook has no flow, pressure-drop, mixing-temperature, water-heater or drainage-capacity model. Its scalar dimension margins cannot establish any of these conditions.

Teaching cavity check: reserve the complete installation envelope

All values are assumed millimeters. A reviewed project detail declares a required concealed installation envelope of 110, including the necessary connection/installation allowance. The actual coordinated cavity available from the same boundaries is 90. Minimum margin =90 − 110 =−20 mm.

Proposed interpretation	Decision
Only the metal body looks 80 deep	The 80 mm body observation does not replace the complete 110 mm required envelope.
Available cavity 90 versus required 110	20 mm shortfall: hold the arrangement.
Revised detail provides 115 against the same requirement	115 − 110 =+5 mm; this scalar limit is met, subject to the actual model depth range and all other interface reviews.

Depth must be tied to the model’s actual mounting/plasterguard and finished-wall references, not to a generic wall thickness. A thicker finish can also change whether the trim reaches the body. Confirm the specific approved extension or revised set-out rather than assume a trim kit will correct any depth.

Keep access and waterproofing separate

A body fitting inside the cavity does not prove the wall can carry its mountings, the penetrations are sealed or the cartridge can be serviced. The support, waterproofing and maintenance documents remain separate references.

Resolved alternatives

A revised wall build-up, a different documented body/trim system or a surface-mounted solution may resolve the conflict. Recheck space, finish, services and evidence after the choice. The tool cannot select the alternative.

Select the bath with its drain, support and maintenance route

Alternative	Reason to consider it	Interface to close
Freestanding soaking bath	The shape and room layout suit a visible standalone fixture.	Actual floor support, drain/overflow connection, faucet position, handling and cleaning/service access.
Drop-in or undermount bath	The design calls for a coordinated surround/top detail.	Actual bath support, surround support, edge/seal detail, cutout and access; the rim is not automatically the support.
Whirlpool or air/electrical bath	The specific functions and operator maintenance brief justify the added system.	Power/control, pump/blower and connections, access and the exact destination requirements.

George OMQ-91724 is a published acrylic freestanding route. Its 1,700 × 800 × 600 mm catalog envelope does not establish the full installed or service envelope and does not supply a floor-load design. [G04]

Kohler guide 1387899-2-A requires its covered bath installation to be supported by the feet, separates counter support, and addresses drain and maintenance access. These are named-guide conditions, not a universal detail for every acrylic or freestanding bath. [T10]

Kohler’s freestanding-bath service guidance illustrates access from below and the consequence of otherwise removing the bath for service. The relevant service plan must be established before finishing the surrounding space. [T09]

Resolved selection

If a chosen bath requires a service route the site cannot provide, select a documented workable installation or revise the site detail. A freestanding silhouette does not make the drain accessible by itself.

Enclosures, seals and access depend on finished geometry

Interface	What the coordinated detail must settle
Enclosure size and handing	Finished opening measurements at the relevant positions, actual door/screen travel, adjacent fixtures and entry.
Glass/hardware and substrate	The exact product, fixings and supporting substrate; a thickness or safety-glass phrase alone is not the complete assembly evidence.
Threshold/tray/tiled floor	The actual water-containment and drainage detail, falls and connections, with the responsible waterproofing/plumbing review.
Penetrations and seals	Manufacturer-specific seal locations and compatible materials; sealing is a detail rather than a generic bead everywhere.
Service and cleaning	Access to waste, valves, hinges, removable covers and actual surfaces.

A finished opening can differ from a framing opening after tile, adhesive, waterproofing and other layers. Record who confirms the actual dimension and when the enclosure is released. A square plan does not prove the finished opening is plumb or consistent at every height.

Resolve overlapping motions

If an enclosure door collides with a vanity drawer or toilet cover, compare a changed handing, a different enclosure type or a revised fixture position on the finished plan. Check usable entry and the applicable accessibility requirements after the change. A door that can be drawn closed is not proof of a usable bathroom.

Follow the selected enclosure detail

The named Kohler bath guide distinguishes seal locations and installation types. Its detail is not copied onto a George enclosure or wet-room system. Use the selected system’s actual instructions. [T10]

Accessible lavatories require more than a fixture height

The U.S. Access Board’s lavatory/sink guide addresses approach space, knee/toe clearance, height, faucet operation, reach and protected exposed plumbing. Its height review uses the higher of the rim or counter, so a vessel rim remains part of that review. It also distinguishes exceptions by application. A fixture tagged ADA or a single acceptable height cannot approve the installed room. [T02]

Connected decision	Procurement implication
Approach and knee/toe space	Basin projection, cabinet, support and trap arrangement must coexist with the actual required clear space.
Reach and operation	Select faucet controls and accessory positions against the applicable requirements and real obstruction geometry.
Exposed services	The specified plumbing protection and supports must fit without defeating the intended access.
Room context	Doors, toilet/shower/bath arrangements and accessories require their own applicable provisions and project review.
Destination	Identify the jurisdiction and the project’s accessibility basis; do not apply one regional dimension as a global default.

Resolve the cabinet choice

A deep drawer bank under a lavatory and a required clear forward approach may compete for the same space. Change the storage/support arrangement or use the applicable documented exception only if it actually applies. Reducing the basin height alone does not remove the drawer obstruction.

Reference scope

This chapter uses a U.S. ADA lavatory example. It supplies no complete accessible-room layout, toilet transfer design or global clearance schedule. The workbook records human decisions and scalar comparisons, not an accessibility certification.

Smart toilets and illuminated fixtures need the correct market variant

Kohler intelligent-toilet guide 1486085-2-B requires its specified grounded dedicated circuit and GFCI protection, forbids an extension cord/plug adapter and coordinates the water stop and electrical outlet locations. Those instructions belong to the covered product and region. They are not a universal voltage, current or protection specification for every smart toilet. [T04]

Purchase record	Why it changes the selection
Exact market model and electrical data	Voltage/frequency, connection, required protection and actual applicable electrical evidence.
Water and mounting	Actual supply, hose/stop, drain and mounting requirements; smart functions do not remove these interfaces.
Outlet, controls and access	Location relative to the fixture, usable controls, isolation/service and the actual installation instructions.
Included functions and parts	Seat/bidet, controller, sensor, heater and other functions; identify what is integral, separate or optional.
Local responsibility	Qualified local electrical/plumbing installation and confirmation of applicable requirements.

Apply the same identity discipline to illuminated mirrors, demisters, pumps and other electrical bathroom products. A mains-powered version and a differently powered market variant are not automatically interchangeable. A plug shape or travel adapter cannot establish destination suitability.

Evidence boundary

A sanitary-ceramic or water-efficiency claim cannot approve the electrical assembly. No IP rating, electrical listing or destination approval is asserted for a GEORGE model in this book.

Verify WaterSense at eligible product and model scope

EPA describes WaterSense labeled products as independently third-party certified for its water-efficiency and performance specifications. Its current products page expressly lists public lavatory faucets among ineligible categories. A blanket instruction to obtain WaterSense for every public or hotel bathroom fitting is therefore wrong. [T01]

Evidence task	Decision
Identify the actual category and use	Private residential lavatory, public lavatory, toilet and showerhead must not be collapsed into one category.
Match the exact product/model or listed combination	Record manufacturer, full model/variant, applicable specification and the evidence supporting the claim.
Use the current official search	Retain the actual result or relevant current record, date and scope in the project evidence file.
Separate the rest of the approval	Water efficiency does not establish site fit, electrical suitability, complete accessibility or universal plumbing-code approval.

EPA’s Product Search warns that products are sometimes incorrectly advertised as labeled and offers a model list. This publication inspected that official search entry point but did not establish a live labeled-product entry for any George model. [T11]

Avoid label transfer

A WaterSense claim for a listed showerhead or bowl/system combination does not automatically cover its valve trim, every compatible component, a factory or the whole bathroom. Read the actual current scope before using the claim in an RFQ or submittal.

Compare a complete assembly quotation

Package	Items and boundaries that can change the amount
Basin/vanity	Selected basin/top/cabinet, faucet, waste/trap, supports, cutouts, finish and locally supplied connections.
Toilet	Bowl/tank or carrier, actuator, seat/cover, inlet/outlet connectors, seals, fixings and market variant.
Shower	Rough body, cartridge, compatible trim, diverter, selected outlets, hoses/holders and wall fittings.
Bath/enclosure	Bath/waste/overflow, faucet, supports, panels/doors/hardware, access and installation detail.
Delivery and work	Packing, labels, logistics/trade boundary, installation, testing/commissioning, documentation and remedies.

Teaching comparison in invented currency units(CU): offer A quotes 12 basin packages at 200 CU =2,400 but excludes 12 compatible wastes at 20 CU and a stated 180 CU packing scope. On the assumed equal basis A becomes 2,400 +240 +180 =2,820 CU. Offer B includes the identical scope for 2,760 CU, or 60 CU less. These are teaching amounts, not real prices or savings.

The conclusion fails if the waste, finish, model, tax/currency basis or delivery/work boundary differs. Obtain an aligned offer or retain an explicit unresolved difference. A lower complete amount cannot make an incompatible component acceptable.

Tool scope

The workbook records the Quote Scope Reference. It does not price fixtures, convert currencies, calculate freight/tax or perform an automatic quotation comparison. Retain the reviewed commercial document behind that reference.

Release a coordinated fixture and room record



GeorgeBuild official image showing visitors in a bathroom display area. Their identities, event/date, purchase decisions and project outcomes are not established by the photograph.

Release input	What needs to agree
Fixture/model and current revision	Exact variant, materials, finish and paired components.
Installation detail	Finished datums, holes/cutouts, connections, supports, service and waterproofing responsibilities.
Destination evidence	Actual market/use and current relevant test/certification documents, including exclusions.
Commercial scope	Actual included parts, quantities, order conditions, site work and delivery boundary.
Named decision	Who reviewed what, when, against which record and with what remaining condition.

If the basin changes, renew the affected faucet/drain/top/drawer checks. If the wall finish changes, renew affected rough-in and concealed-body depth checks. If a market variant changes, renew relevant connection, evidence and power requirements. Keep the superseded files retrievable; an old finish approval cannot release a new concealed valve.

A showroom visit can compare forms and finishes and clarify the request. It does not itself establish a model’s performance report, actual site measurements or completed installation acceptance.

Record physical receipt separately from installed acceptance

Agreed check	Useful evidence
Identity and count	Fixture/model, market variant, finish, current order reference and package labels.
Visible condition	Chips/cracks, surfaces, seals and other visible observations within the agreed inspection coverage.
Parts and documents	Paired bodies/trim, seats, wastes, hoses, fixings, controllers and actual required instructions/labels.
Selected interfaces	Agreed measured features or trial assembly against the current drawing; not a blanket performance result.
Exceptions	Affected quantities, photos, disposition, responsible reviewer and linked correction/replacement records.

Teaching order: 12 basins. First event receives 8 and accepts 7; second receives 4 and accepts 4. Gross received =12; accepted =11; acceptable shortfall =1. A final-delivery declaration does not erase the chipped/unacceptable piece. If one replacement later arrives and is accepted, gross received becomes 13 and accepted becomes 12; keep the original observation and disposition.

Receipt cannot prove a concealed joint is leak-free or a mixer is properly commissioned. Local installation checks, leak/functional tests, control settings, waterproofing and electrical acceptance need their own actual records and responsible personnel.

Record the actual inspection

The blank companion tool contains no actual customer measurements or acceptance. A product display and these teaching quantities are not proof that every production fixture has been inspected.

Fixture Schedule: identify the product and supporting documents

The companion XLSX has three worksheets and six work areas, with 50 input records per work area. It records fixture identity, references, scalar dimension comparisons, human review and physical receipts. It contains no preset model dimensions, pressure range, certification or customer record.

Worksheet / header row	Work to record
Fixture Schedule / 7	Fixture ID, location, fixture type, manufacturer/model, market variant, current specification revision, finish, paired-component and quote-scope references.
Fixture Schedule / 67	Current fixture/revision, installation detail, support/waterproofing and evidence references; human decision/record and reviewer/date.

A reference must lead to the actual current document. A Recorded decision reports a human review; the file does not inspect a certificate, establish water-pressure suitability or prove installation compatibility.

Use an actual relationship

For the selected basin, retain its exact model/variant and pair reference rather than merely entering bathroom. Link the current detail showing faucet datum, holes, waste, support and vanity interfaces. Keep the electrical and waterproofing responsibilities explicit where they apply.

Revision discipline

Update the current fixture revision and renew affected interface/review records when the actual specification changes. A valid identifier cannot make a superseded drawing current.

Interface Review: compare one declared scalar limit at a time

Work area / header row	Actual function
Interface Review / 7	Interface ID, fixture/revision, paired-model reference, check description, Minimum/Maximum rule, required limit/unit and available value/unit, requirement/source references and calculated margin/state.
Interface Review / 67	Interface ID/current revision, human decision, actual review record and paired-model review references, reviewer/date.

For Minimum, margin =available − required. For Maximum, margin =required − available. Enter values from the same datum and unit; mm/in mismatch is flagged rather than automatically converted. Zero margin is a visible boundary condition, not an engineered tolerance allowance.

Reproduce the teaching checks

Select the Minimum rule and enter Required limit 300, Available value 285 and matching mm units for the assumed finished-wall case: −15. For the reach case, Minimum with Required limit 200 and Available value 180 gives −20; add a separate Maximum rule with Required limit 260 for its other bound. For the cavity, Minimum with Required limit 110 and Available value 90 gives −20.

The 305 −20 wall-stack subtraction is performed and documented in the project detail; it is not an automated stack calculation in this workbook. A nominal target or permitted range must be represented correctly rather than recast as a universal minimum.

Arithmetic is not compatibility

A nonnegative margin only meets that declared scalar limit. It does not approve pipe threads, sealing, support, flow/pressure, mixing controls, accessibility, electrical safety or the complete fixture pair.

Receipt: order lines and actual arrival events

Work area / header row	Actual function
Receipt / 7	Order Line ID, fixture/revision, item/scope and PO references, ordered pieces and final-delivery declaration; linked received, accepted and outstanding totals.
Receipt / 67	Unique event ID, order line/revision, receipt date, received and accepted piece counts, damage/exclusion reference or None, inspection reference and reviewer/date.

For the 12-basin example, enter 8 received/7 accepted and 4 received/4 accepted. The file should retain 12 gross received and 11 accepted, with one acceptable piece outstanding. A real accepted replacement is a separate 1/1 arrival event; it makes gross 13 and accepted 12. Do not overwrite the original event or count one arrival twice.

Use a unique event ID and the actual current order/item revision. Accepted count cannot exceed received count for an event. Retain the actual return, correction or replacement documents; this is not a complete returns/refunds ledger or installation sign-off.

Use and capacity boundary

Each work area has 50 input rows. Extensions need formula/validation/link review. The file does not synchronize CAD, supplier, PO, payment or website data. Native Microsoft Excel has not been tested for this release; available-engine functional checks are recorded separately.

Working glossary

Term	Meaning in this book
Fixture ID / model / variant	Project identity / manufacturer product / specific market or configuration choice.
Datum / finished face	Defined measurement reference / actual face after the stated build-up.
Rough-in / set-out	Model-specific connection location and installation geometry; always state the reference and permitted range.
Overflow / waste / trap	Basin/bath overflow path / drain fitting / plumbing component whose correct design and installation remain project-specific.
Carrier / actuator	Supporting concealed toilet assembly / flush control; compatibility must be established for the selected system.
Rough body / trim / diverter	Concealed valve component / visible control assembly / outlet selection or transfer function.
Minimum / maximum margin	Entered value minus minimum / maximum minus entered value, on the same scalar basis.
WaterSense / installed approval	Defined product-label program / separate project decisions for fit, codes and installation.
Received / accepted	Physical arrivals / pieces acceptable under the recorded review.

Sources and scope notes

[G01] George Bathroom - Diamond Shaped One-piece Washdown Toilet X066

https://georgebathroom.com/product/diamond-shaped-toilet-x066/

Named model dimensions,one-piece floor-mounted washdown,ceramic/PP and listed S/P-trap distances. Public table only;selected outlet variant/datum requires actual drawing. No WaterSense,load,pressure or certification inferred.

[G02] George Bathroom - Above Counter Rectangular Basin Series S2103

https://georgebathroom.com/product/above-counter-rectangular-basin-series-s2103/

Named above-counter one-piece ceramic series and color routes. No exact series-member dimensions,overflow/drain data or tested faucet pairing established.

[G03] George Bathroom - chorme matte black copper basin faucet KSH-2602/B/G/Q

https://georgebathroom.com/product/matte-black-copper-basin-faucet-ksh-2602b/

Named brass basin/top-mounted faucet route. No reach,height,pressure,WaterSense or performance test inferred from marketing descriptions.

[G04] George Bathroom - Acrylic Freestanding bathtub OMQ-91724

https://georgebathroom.com/product/acrylic-freestanding-bathtub-omq-91724/

Named acrylic freestanding bath,published1700×800×600mm envelope. Not an installed/service envelope,floor-load,care or drain-compatibility specification for a final ordered variant.

[G05] George Group Foshan - George Group Foshan Official Showroom

https://georgegroupfoshan.com/george-group-foshan/

Official sanitary showroom image context. Display is not a project outcome,test result or current availability record.

[G06] GeorgeBuild - About georgebuild

https://www.georgebuild.com/about-us/

Official bathroom-display visit photograph. No attendee identity,event/date,purchase approval or project completion inferred. Corporate statistics/certification gallery not adopted.

[T01] U.S. Environmental Protection Agency - WaterSense Products

https://www.epa.gov/watersense/watersense-products

Third-party water-efficiency/performance certification and public-lavatory-faucet exclusion. Not a universal bathroom/plumbing/electrical approval. No George model listing established.

[T02] U.S. Access Board - Guide to the ADA Accessibility Standards: Chapter6 Lavatories and Sinks

https://www.access-board.gov/ada/guides/chapter-6-lavs-sinks/

U.S. ADA lavatory/sink scope and connected installed conditions. No global default,complete room/toilet/shower design or approved project layout supplied.

[T03] Delta Faucet Company - R10000 MultiChoice Universal Rough and Saylor T17035/T17235/T17435 Trim Specifications

https://media.deltafaucet.com/SpecSheet/DSP-B-FVS2-SA5201.pdf

Named body/trim/cartridge relationship,HF tub-outlet exclusion and component-specific conditions. No cross-brand pairing,site flow/pressure guarantee or transferred test-cap rating. Numeric performance and certification not assigned to George.

[T04] Kohler - Intelligent Toilet Installation Instructions1486085-2-B

https://resources.kohler.com/webassets/kpna/catalog/pdf/en/1486085-2.pdf

Named-guide grounded dedicated/GFCI service and outlet/supply coordination;no adapters/extensions. Cover model field blank;no unverified model name added. Values remain product/region-specific;no universal voltage/current/pressure published.

[T05] Hansgrohe USA - Which Faucet Goes With Which Sink?

https://www.hansgrohe-usa.com/bathroom/advisor/product-advice/faucet-sink-combination

Pair-specific functional/splash/free-space tests and on-site conditions. No actual George/hansgrohe pair tested or approved;no guaranteed splash performance asserted.

[T06] Kohler - K-33151 Clicker drain without overflow

https://techcomm.kohler.com/techcomm/pdf/K-33151_spec_US-CA_Kohler_en.pdf

Named without-overflow drain and model-specific connection information. No compatibility with S2103 or another George basin inferred;nominal drawing not a universal drain standard.

[T07] TOTO USA - Installation Manual CST775,CST776,CST785,CST786

https://www.totousa.com/filemanager_uploads/product_assets/InstallationManual/0GU216_CST775_CST776_CST785_CST786_IM.pdf

Named-family finished-wall datum,variant distinction,contents and care context. No TOTO dimensions/pressure/care transferred to George or global toilets. No DIY installation sequence reproduced.

[T08] Geberit USA - Duofix In-wall System with Sigma Concealed Tank For2x4 Construction

https://www.geberitnorthamerica.com/sanitary-piping-systems/installation-flushing-systems/geberit-duofix/systems-for-wall-hung-toilets/for-2x4-construction/

Carrier/tank,bowl and actuator compatibility/ordering distinctions. No carrier load,framing value or WaterSense listing transferred. Linked2026PDF parsed partly garbled;no numeric details taken from it.

[T09] Kohler Assist - Freestanding Baths – Disassembly for Servicing

https://assist.kohler.com/en/bathing/Freestanding-Baths-Disassembly-for-Servicing

Named manufacturer service guidance illustrates below-access and removal consequences. Not a universal service procedure for all baths;no removal instructions adopted for George.

[T10] Kohler - Drop-In / Under-mount Bath Installation Guide1387899-2-A

https://techcomm.kohler.com/techcomm/pdf/1387899-2.pdf

Named-guide feet/support,counter support,drain/access and different seal details. No universal gap,load,drain or seal recipe transferred to George baths/enclosures.

[T11] U.S. Environmental Protection Agency - WaterSense Product Search

https://lookforwatersense.epa.gov/products/

Official lookup route and need for exact model evidence. Entry page read,not a complete database audit;no George product-specific labeled entry confirmed.

Photo credits and evidence scope

Cover: George Group Foshan official sanitary showroom. Source: https://georgegroupfoshan.com/george-group-foshan/ [G05]

Display visit: GeorgeBuild official gallery. Source: https://www.georgebuild.com/about-us/ [G06]

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The four original diagrams illustrate interface relationships. All explicitly assumed teaching numbers are independent of the published George model parameters. None of the diagrams is a manufacturer’s approved drawing,customer installation record,test certificate,plumbing design or accessibility approval.