Construction model and build summary

The timber frame replaces the sheet carcass. The finished cupboard remains 1000 W x 560 D x 1989 H, including the retained front plinth.



Frame. Three 45 x 45 rear uprights reach the finished floor and are 1989 long. Two front uprights are 1970 long and stand on the 19-thick flat plinth. The center front upright is replaced by one horizontal rail at each shelf. The decorative 19-thick east panel stays inside the 1000 width.

Shelves. Five levels each use eight full-width 20.5 x 45 slats, cut to 840 long, with 15 gaps. Slats bridge two 373.5 clear spans. The west bearer is 15 from the radiator face.

Infill. The 271-high CLS frame uses actual 38 x 89 stock. The full-height east corner post backs the side bracket. Front and east plasterboard with skim finish flush at depth 560 and width 1000.

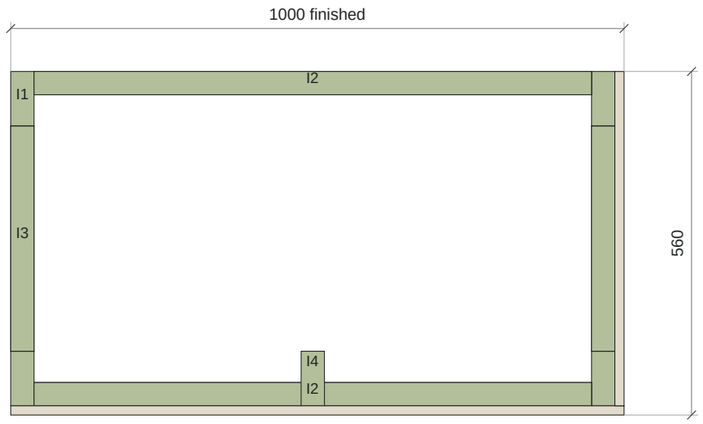
Floor and base. The notched 19 mm interior floor sits at Z 64-83. The floor has open pipe slots from the west edge; there is no plywood base underneath. BPV15 lies flat, full 150 width x 19 thickness. The rear uprights stand directly on the leveled floor. Two 45-degree miters form the 80 depth return to the base cabinets.

Part IDs. F = redwood frame; S = shelf slats; I = CLS infill; P = sheet panels and flat plinth. Model object names match the schedules.

Model controls. Collections 06 and 07 hide the finish panels and rail/doors for construction viewing. Toggle them in the Outliner to inspect the finished assembly. Camera renders show both states.

Pack contents. AC-02 frame plans; AC-03 shelves and joints; AC-04 CLS and rail; AC-05 materials and cuts; AC-06 plinth/floor and installation; AC-07 radiator/vents; AC-08 stock and costs.

CLS plan / 1:10 / frame projected

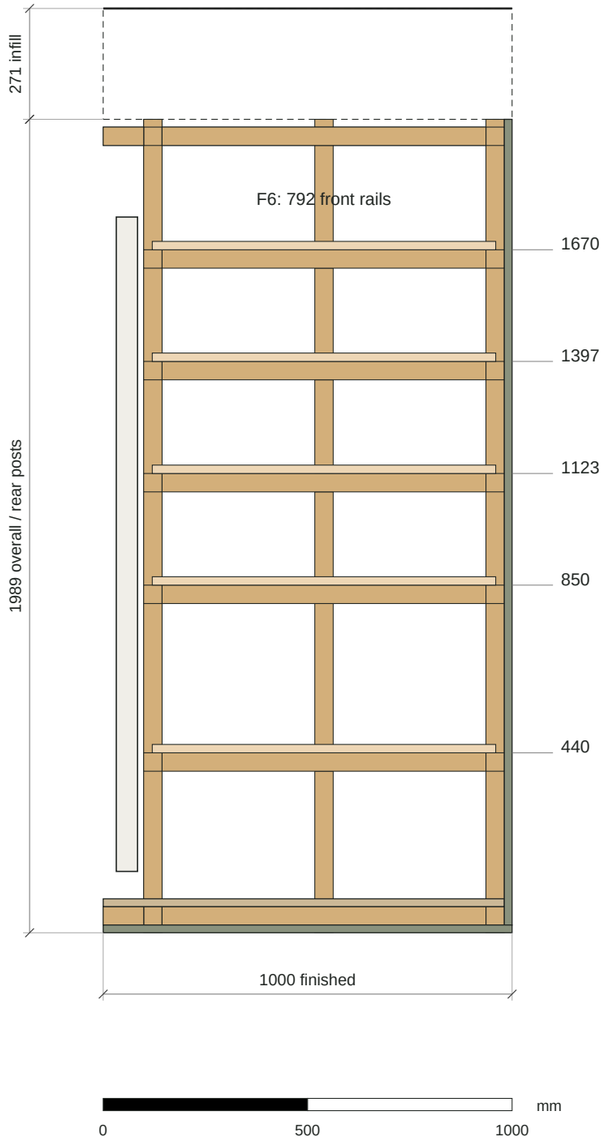


I1: 271 vertical | I2: 909 | I3: 367 | I4: 93 vertical

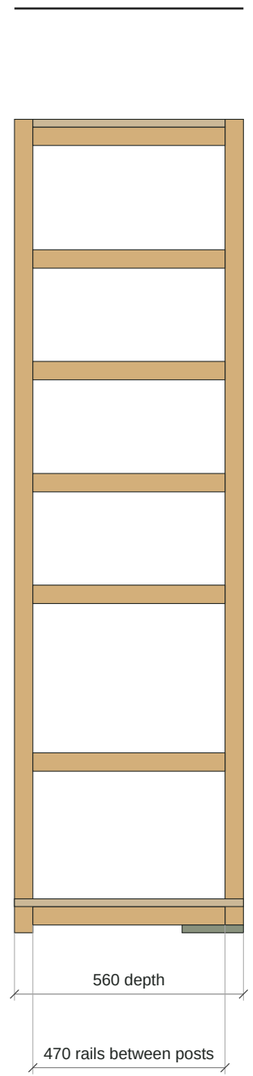
Frame elevations and setting-out plan

All heights are above finished floor. Build in place; confirm actual wall and timber dimensions before cutting.

Front / doors and plasterboard removed

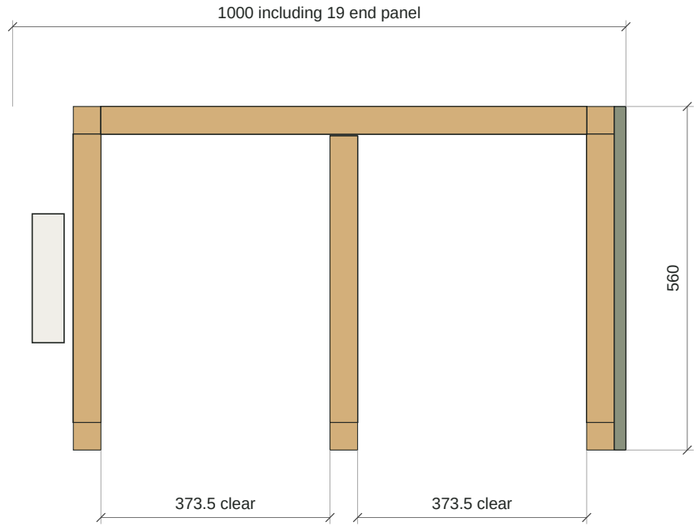


Side / ladder at X 99



Rear is left; front is right.

Plan / depth runs toward the room



X setting-out. Rear posts start at X 99, 517.5 and 936. Front posts start at X 99 and 936. Rear posts: Z 0-1989; front posts: Z 19-1989. All posts are 45 wide; east panel is X 981-1000.

Open front. F6 rails span X 144-936 at each shelf. The center rear post supports 467-long depth bearers; rated front angles connect these bearers to F6.

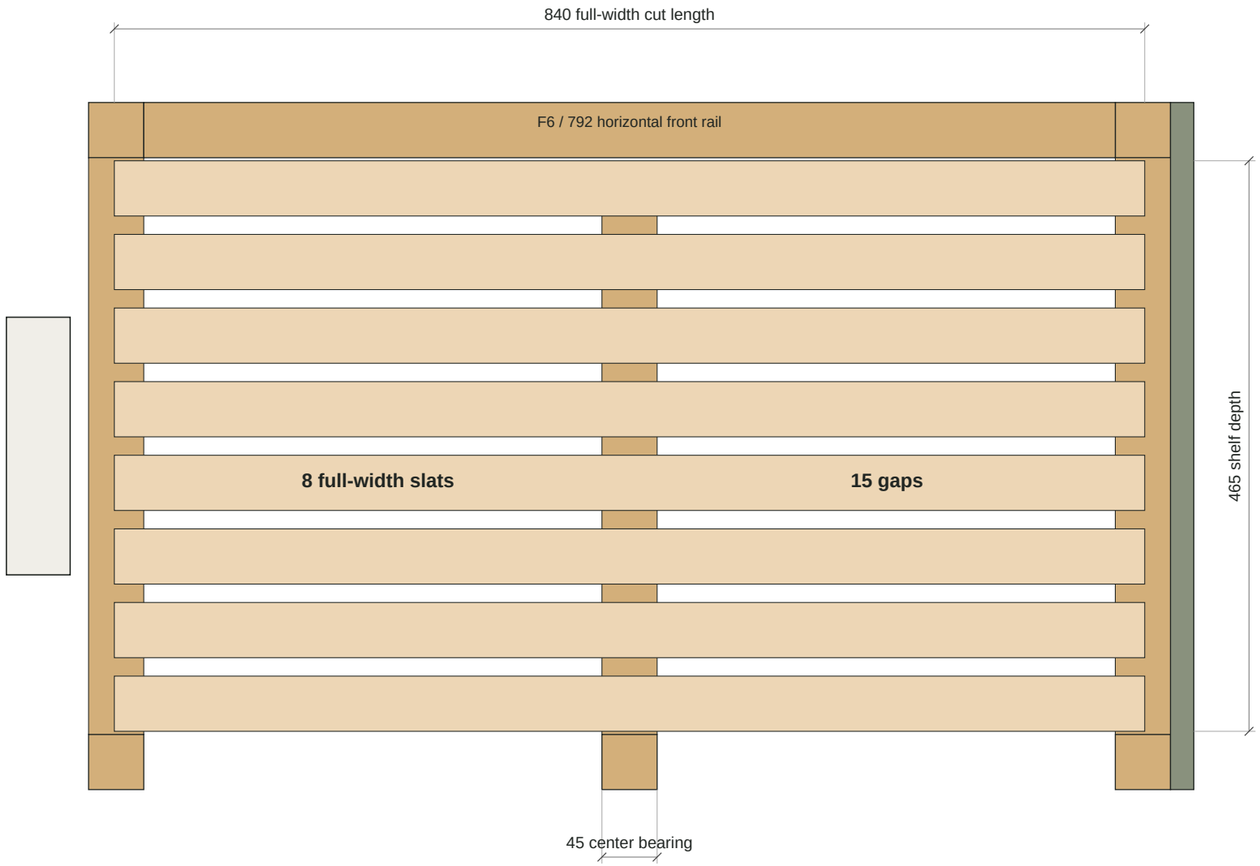
Floor and top. Floor P7 is Z 64-83; top P3 is Z 1970-1989. Both use five edge recesses, including two west-edge cutouts around the remaining posts and wall ties. The westmost uprights and depth rails are omitted. Four 99 mm east-west ties reach the west wall; anchor their wall ends to sound structure.

Wall ties. Anchor rear posts to north-wall structure and the four west-reaching tie ends to west-wall structure. Keep the radiator and valve zone clear. Pack gaps solidly.

Shelf layout, levels and bearer joints

Eight continuous slats span both bays at each of the five shelf levels. Keep the center bearer.

Typical shelf plan



Level	Slat underside	Slat top
1	440	460.5
2	850	870.5
3	1123	1143.5
4	1397	1417.5
5	1670	1690.5

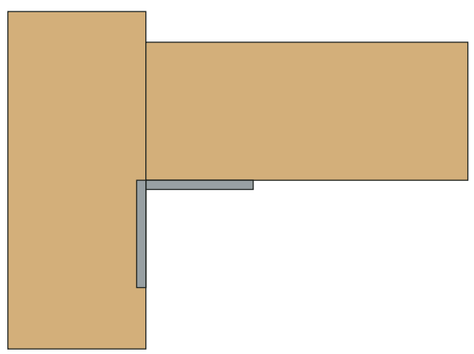
Quantity. 8 slats per level x 5 levels = 40. Each slat is 840 long x 45 wide x 20.5 thick.

Support. Two 373.5 clear spans per slat. Each outer bearing is 24; center bearing is the full 45. Slats run continuously across the center bearer.

Depth spacing. Eight 45-wide slats plus seven 15 gaps = 465. Set the first rear edge at depth 47.5 and the last front edge at 512.5.

Clear heights. Floor to first slat underside: 357. Above shelf 1: 389.5 clear; then 252.5, 253.5 and 252.5. Top shelf to P3 underside: 279.5.

Bearer end / side view / 1:2



F3 bearer / 45 x 45

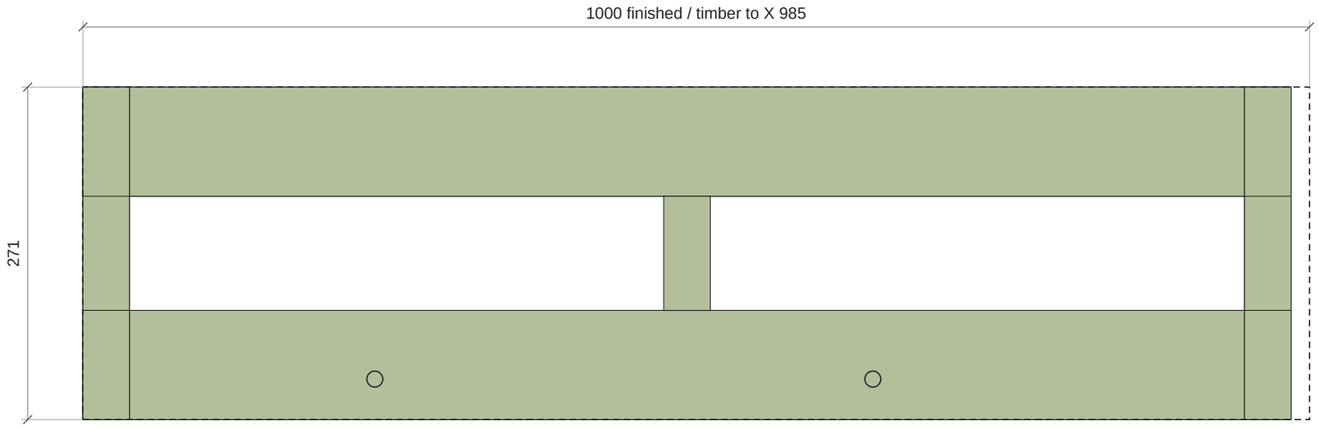
Steel angle supports the underside.

Joint. Fit one load-rated angle at each end of every depth bearer and front shelf rail. The sketch shows a 35 mm leg envelope that fits the 45 mm timber. Use the bracket maker's screws and hole pattern; do not rely on a single screw into bearer end grain.

CLS infill and sliding-rail backing

Actual CLS section: 38 x 89. Continuous front backing and a full-height east post carry the proposed mount locations.

Front / plasterboard omitted



Face mounts: X 238 and 644; center Z 2022.

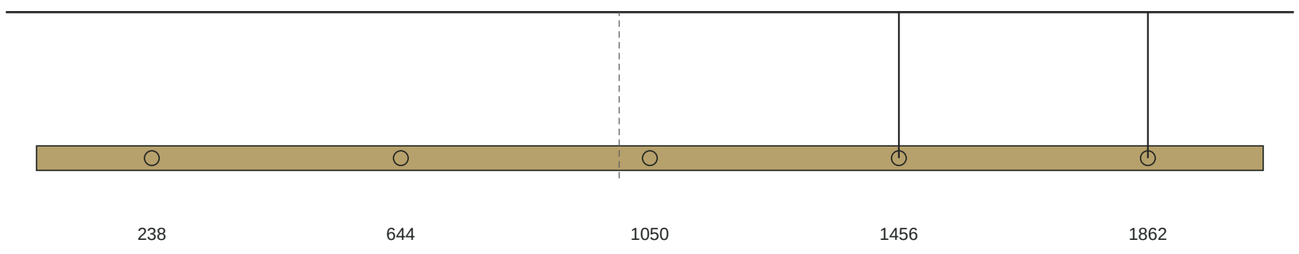
Front backing. I2 lower rail: Z 1989-2078, depth 507-545. Both face mounts pass through the finished front at depth 560 into 38 mm timber backing. Rail center is 33 above the bottom of this member.

East bracket. I1 east front post: X 947-985, depth 456-545, Z 1989-2260. Side screws pass through the east finish into side grain. The illustrated 75 x 94 x 50 L bracket has 6 mm steel thickness.

Finish allowance. 12.5 plasterboard plus assumed 2.5 skim = 15. Front framing ends at depth 545; side framing ends at X 985. Confirm the finished build-up and shim bracket faces as required.

Load path. Tie the CLS frame to north/west-wall structure. The decorative end panel and plasterboard carry no rail anchors. Add ceiling blocking at the two mounts beyond the cupboard.

Rail mount positions / from interior west wall



238 / 644: face mounts | 1050: side L bracket | 1456 / 1862: ceiling mounts

Datum	Height	Below ceiling	Relationship
Door top	1987	273	15 gap to rail bottom
Rail bottom / top	2002 / 2042	258 / 218	40 rail height retained
Rail fixing center	2022	238	All five mounts
Hanger top	2122	138	Retains reference hanger geometry

Hardware hold point. Confirm door-pair mass, kit rating, through-bolt/backing details, angle capacity, rail spacers and wall/ceiling anchor design before drilling. The 38 mm CLS depth does not establish a safe fixing capacity.

Door travel. Joined 1965 x 497 fronts give a 996-wide pair with a 2 center gap. The pair travels 1000 east and covers the basin in its open position. Fit stops, anti-jump restraints and a floor guide.

Materials and finished cut schedule

All cuts match the approved radiator model. Stock allowances and VAT-inclusive timber costs are on AC-08.

ID	Part	Qty	Section	Cut length
F1	Rear floor-standing uprights	3	45 x 45	1989
F1	Front plinth-supported uprights	2	45 x 45	1970
F2	Top/bottom depth rails	6	45 x 45	470
F3	Outer shelf bearers	10	45 x 45	470
F3	Center shelf bearers	5	45 x 45	467
F4	Rear bay ties	4	45 x 45	373.5
F4	Continuous front ties	2	45 x 45	792
F5	West short ties	4	45 x 45	99
F6	Front shelf rails	5	45 x 45	792
S1	Full-width shelf slats	40	20.5 x 45	840
I1	CLS corner posts	4	38 x 89	271
I2	CLS front/rear rails	4	38 x 89	909
I3	CLS side rails	4	38 x 89	367
I4	CLS center spacer	1	38 x 89	93

ID	Sheet/finish part	Qty	Blank and finishing cuts
P1	BPV15 flat plinth	1 board	2770 x 150 x 19. Blanks: 1000, 230, 1480; 45-degree miters.
P3/P7	19 mm top / floor	2	981 x 560 each; five edge recesses. West recesses: 144 x 45 each. P7 also has two open pipe slots.
P4	TGV23 east end panel	1	2320 x 600 x 19 stock; cut to 1989 x 560. Front bottom notch: 99 x 19. High vent opening: 360 x 130.
P5	Front plasterboard	1	1000 x 271 x 12.5; skim to total 15.
P6	East return board	1	545 x 271 x 12.5; skim to total 15.
D1/D2	Sliding door fronts	2	1965 x 497; 2 center gap. Each low vent opening: 230 x 80.

Fixings and finish. Allow 40 rated angles for 15 depth bearers and five front shelf rails, plus frame-joint angles where needed; approximately 80 angles total. Select angles that fit the 45 mm timber, especially the short west ties. Allow about 400 angle screws and 150 slat-retaining screws, plus frame/panel fixings. Add D4 wood glue, wall packs/anchors, board screws/tape/beads/skim, varnish, matching plinth edge finish, and rated rail hardware. Confirm screw quantities from the selected brackets.

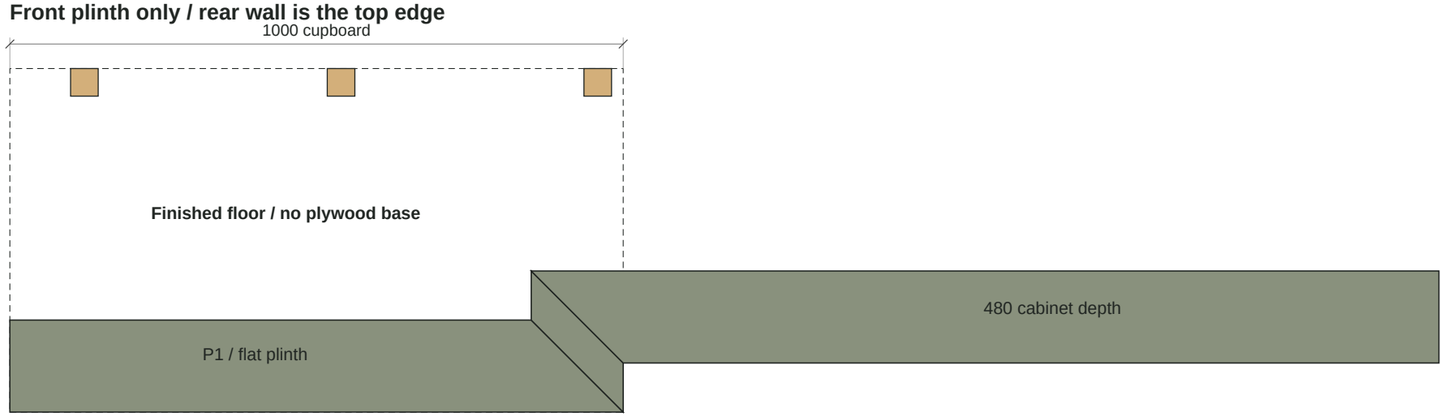
Heating. Faro 31003 radiator, 1600 x 210 x 52; angled valves, pipes and wall brackets. The installed face projects 84. Valves are excluded from the radiator product.

Vents. Two antique-brass door grilles, 250 x 100 outer size; one east-side grille, 380 x 150. Generic sizes: buy the grilles before cutting openings.

Front plinth, floor and installation sequence

Build and finish the cupboard, infill and structural backing before hanging the door pair.

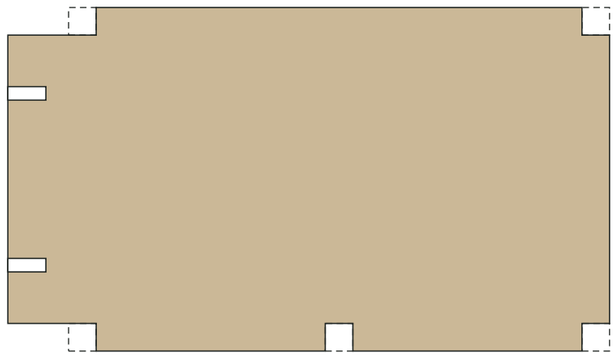
Front plinth only / rear wall is the top edge



P1 miters. Retain the full 150 width. The 80 front-depth step needs a 230-long return blank because the miters cross the full board width. Mark both joints from a full-size template before cutting. Three blank envelopes total 2710, leaving 60 before kerf/trim from a 2770 board.

Floor support. Set the three rear uprights on a dry, level floor. Support the two front uprights on the flat plinth at Z 19. Pack low points and secure against movement. Provide matching 19-high supports under the adjacent cabinets; their supplier must approve the low-base mounting detail.

P3 top / P7 floor / 981 x 560 / simplified recesses



Panel cuts. P3 and P7 each need a 981 x 560 x 19 blank. Both fit side by side in a 1220 x 1220 half-sheet, allowing kerf; confirm half-sheet availability. Cut two 144 x 45 west-edge rectangles, each clearing the remaining upright and wall tie: depths 0-45 and 515-560. Retain the other three post recesses. P7 only: open two 62 x 22 pipe slots from the west edge; see AC-07. P3 sits at Z 1970-1989; P7 at Z 64-83. Dry-fit around posts.

P4 plinth clearance. Cut the east panel to 1989 x 560. Remove a 99 x 19 rectangle from its front bottom corner: depths 461-560, Z 0-19. The rear edge reaches the floor. Template the clearance against the plinth before cutting.

1. Survey and prepare. Confirm 1000 width, 560 depth, 2260 ceiling, finished floor, services and sound anchor locations. Confirm actual timber sections. Establish rail-load and ceiling-blocking details before closing the infill.

2. Fit the front plinth. Template the two miters. Cut lengths/miters only on BPV15. Seal cuts and finish its exposed long edge to match Reed Green. Lay and level P1 at Z 0-19. Keep the floor behind it clear; no plywood base is needed.

3. Build the main frame. Label cuts. Fit three 1989 rear uprights on the floor and two 1970 front uprights on the plinth. Fit F2/F4/F5 ties and the five F6 front shelf rails in place. Omit both westmost uprights and both west-wall depth rails and the center front upright. Square and anchor the frame to north/west-wall structure with solid packs.

4. Fit shelf supports and panels. Install the radiator and valve connections before closing access. Set F3/F6 tops at 440, 850, 1123, 1397 and 1670. Fit rated angles at bearer and front-rail ends. Slide P7 toward the west wall around the pipes using its open slots. Fit recessed P3. Cut and seal P4 and door vent openings to the bought grilles; notch P4 for the front plinth and fit P4 and its grille.

5. Build and finish the CLS infill. Fit I1-I4 with the east front post continuous to the ceiling. Anchor the frame to structure. Check front backing at both rail holes and side-grain backing at the east bracket. Fit ceiling blocking beyond the cupboard. Board, tape/bead and skim to the finished planes.

6. Finish and fit the slats. Cut 40 slats at 840. Sand edges and seal all faces/ends with fully cured water-based varnish. Fit eight per level at 15 gaps across all three bearers. Predrill retaining screws at one outer bearer; use slotted retaining holes at the center and opposite bearer to allow movement.

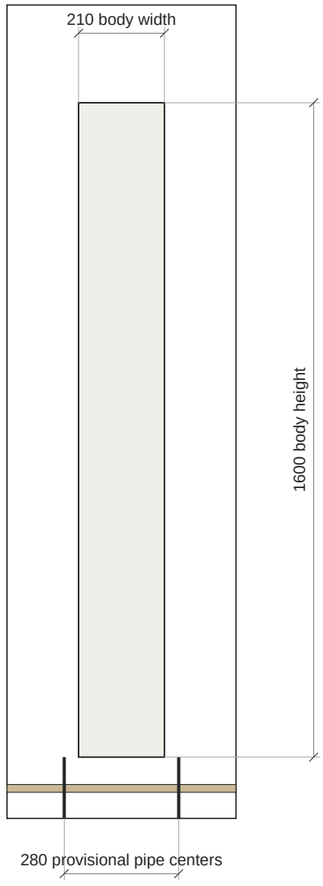
7. Hang and test the doors. Follow the rated hardware instructions for brackets, spacers, through-bolts and joining bars. Set rail center at 2022 and rail bottom at 2002, 15 above the door top. Fit door grilles, stops, anti-jump restraints and guide; test full 1000 travel under load. Test radiator plumbing and controls; keep linens clear of the radiator and vents.

Supplier references. Jewson PSP50050 (45 x 45 PSE) and PSP25050 (20.5 x 45 PSE) product sizes were checked. CLS assumes actual 38 x 89; confirm section and strength grade. BPV15 is finished on its face and one short edge, so its exposed long edge needs matching finish. This pack supersedes the cupboard construction detail on bathroom installation revision 3; main room integration uses this approved cupboard design.

Radiator, ventilation and pipe setting-out

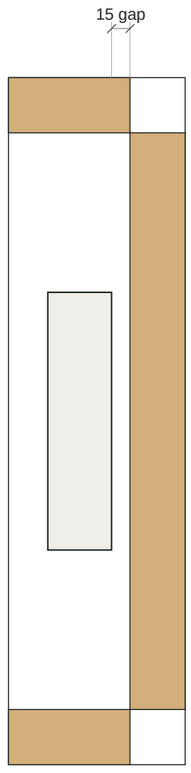
West-wall radiator fits beside the shelves. Dimensions are from the finished interior west wall and north wall.

West wall / view from cupboard interior



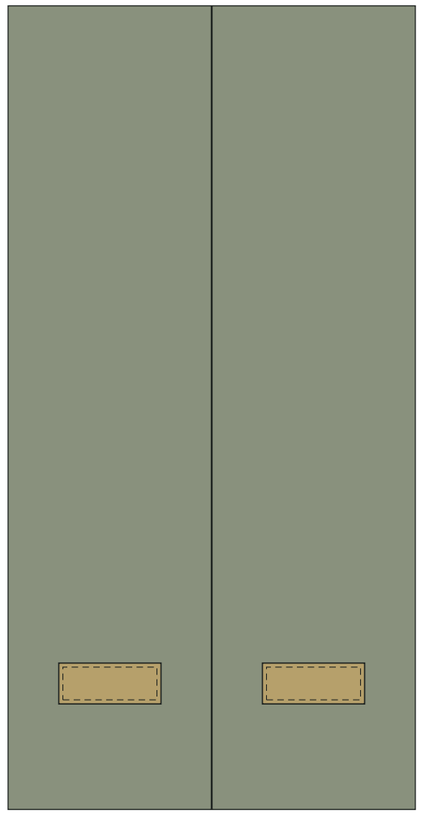
Radiator bottom 150; top 1750; floor top 83.

West strip / plan



Radiator position. Body depth range 175-385; installed face at X 84. Nearest bearer starts at X 99. No bottom depth rail sits behind the radiator. Wall brackets and valves are illustrative.

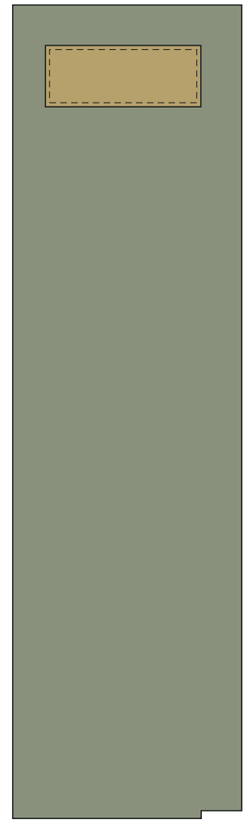
Doors / front elevation



Vent centers X 251 / 749; outer Z 280-380.

Door grilles. Each outer frame is 250 x 100; opening is 230 x 80, centered at Z 330. Keep openings within recessed door panels and clear of joining straps. Model total intake free area: 239.2 cm2.

East side / return



Depth 80-460; Z 1740-1890.

Side grille. Outer 380 x 150; opening 360 x 130. Model outlet free area: 309.6 cm2.

P7 open pipe slots. Cut from the west edge at X 0 to X 62, at depths 129-151 and 409-431: two 62 x 22 slots. These let the floor slide toward the wall around the pipes. Template from installed pipes before cutting.

Installer checks. The 15 mm timber gap is confirmed for this design. Confirm vent free area, temperatures, valves and wall anchors. Product: 10.15 kg dry plus 2.79 L water; 389 W at delta T50 / 203 W at delta T30. Keep access for valve operation and service.

Stock cutting and timber cost

Jewson Cranleigh. Prices supplied for this design include VAT; request the stock lengths before ordering.

Timber	Net cuts	Stock required	Price inc. VAT	Cost inc. VAT
45 x 45 PSE redwood	27.196 m	10 x 3.0 m	GBP 4.44/m	GBP 133.20
20.5 x 45 PSE redwood	33.600 m	14 x 3.0 m	GBP 2.36/m	GBP 99.12
38 x 89 CLS	6.281 m	3 x 2.4 m	GBP 6.36/board	GBP 19.08
Required timber total				GBP 251.40
Optional PSE spares		1 x 3.0 m of each	GBP 20.40 total	GBP 271.80 with spares

45 x 45 stock / ten 3.0 m boards.
Boards 1-2: 1970 + 792 + 99 + 99 each.
Boards 3-5: 1989 + 792 each.
Board 6: 792 + 792 + 470 + 470 + 373.5.
Boards 7-8: six 470 cuts each.
Board 9: 470 + 470 + 467 + 467 + 467 + 467.
Board 10: 467 + 373.5 + 373.5 + 373.5.

Slat stock / fourteen 3.0 m boards.
Boards 1-13: three 840 cuts each.
Board 14: one 840 cut.

CLS stock / three 2.4 m boards.
Boards 1-2: 909 + 909 + 367 each.
Board 3: 367 + 367 + 271 + 271 + 271 + 271 + 93.

Excluded costs. Plywood, bought doors/end panel/plinth, plasterboard/skim, brackets/screws/anchors, finish, radiator, valves, plumbing, grilles, rail hardware, delivery and cutting charges.

Cut allowance. Every allocation below allows 3 mm kerf per cut and 20 mm total end trim per board. Keep the 373.5 mm cuts precise. Reject split ends and weak knots. The two westmost uprights and their depth rails are omitted; four 99 mm ties extend to the west wall.

Plywood nesting. Only P3 and P7 remain: two 981 x 560 x 19 blanks. Place them side by side in a 1220 x 1220 half-sheet with room for kerf and trim. Ask for a half-sheet and blank-cutting price; a full sheet also fits.

Branch. Jewson Cranleigh, GU6 8RY. These are the supplied VAT-inclusive rates, not a current branch quotation. Confirm stock lengths and availability.

Materials. PSP50050: 45 x 45 PSE; PSP25050: 20.5 x 45 PSE. CLS assumes actual 38 x 89. Confirm supplied sizes and strength grade.