



Est. 2010 — The Wine Storage Specialist

ASSEMBLY INSTRUCTIONS

Timber Wine Rack

Every configuration in one document: the classic unit, the sloped unit, and joining units into a rack of any size.

WHICH PARTS YOU NEED

WHAT YOU HAVE	READ
One square or rectangular unit	Part one, then Part four if the rack needs brackets
One sloped unit	Part two, then Part four if the rack needs brackets
A custom rack of several units	Part one and Part two to build each unit, Part three to join them, Part four to fix the wall — brackets are not optional on a joined rack

WATCH IT ASSEMBLED

Scan for the step-by-step video guide, with every instruction timed to the video so you can jump to the step you are on. It covers the single-unit build in Part one. The joins in Part three and the wall brackets in Part four are not in it.

kingsbottle.com/pages/timber-wine-rack-assembly
kingsbottle.com.au/pages/timber-wine-rack-assembly



UNITED STATES



AUSTRALIA

BEFORE YOU START

Work on a flat, level surface with room on all four sides.

Tools: a **rubber mallet** to build a unit — nothing else is needed for Parts one and two. Joining adds a **tape measure**; nothing in Part three is driven, so no mallet. Wall brackets add a **drill** and **screwdriver**.

Unpack fully and check the parts against the bill of materials for your size (see the appendices).

Keep the neck protectors aside until the frame is complete.

For a rack of several units: finish every unit as a single rack first, have the connector parts counted and to hand, and plan on two people from the first lift onwards.

SAFETY

Never use a steel hammer on the timber. It crushes the slat ends and the joint will not hold.

Do not load bottles until the frame is fully seated and, where required, fixed to the wall.

A joined rack must be fixed to the wall before it is loaded. Joining puts every wall past the size where a rack can rock, so brackets are not optional there. Part four gives the count and the method.

Clips alone are not a side-by-side join.

Do not load bottles until every metal connector piece is in, on both bar planes.

Never stand or climb on a rack, joined or single.

WHAT IS IN THE BOX**Timber slats**

The horizontal timber pieces that carry the bottles.

Neck protectors

Clip onto the front frame to stop bottle necks slipping out.

Wall brackets

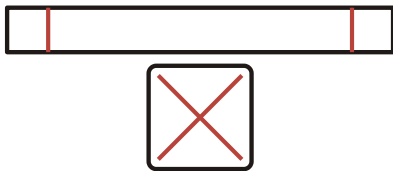
Ordered separately. 237 mm long, supplied with plug and screw.

Metal pieces MP01–MP12

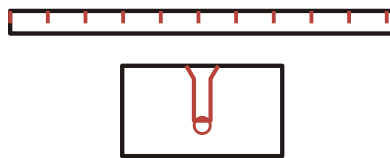
The steel frame members. Lengths differ — check the appendices for which your size uses.

Connector clips and metal connector pieces

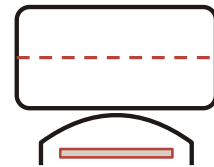
Ordered separately, for joining units. Part three gives the count.

**TIMBER SLAT**

235 mm long, 27 mm square. A 1 mm slot at each end, on both diagonals of the section — the slat sits at 45°, so the slots line up with the two bar directions.

**METAL BAR MP01–MP12**

22.5 mm wide, 1 mm thick. Slots at a 95.5 mm pitch — one for every grid node. Length varies with capacity; pitch and section do not.

**NECK PROTECTOR**

55.3 × 28 mm. The crown clips down over a horizontal bar. Vertical bars carry none. One per bottle position.

Connector clips, metal connector pieces and wall brackets are ordered separately and are not shown above; they are drawn where they are used, in Parts three and four. Millimetres throughout; drawings are not to a single scale.

PART ONE

Classic rack

One square or rectangular unit. Three steps, and the same sequence applies to every size — only the number of slats changes.

01 ASSEMBLING THE BOTTOM FRAME

Find a flat surface to begin the assembly process.

Start by assembling the bottom section.

Align the first timber slat with the cross metal grid. Starting from around the centre of the frame makes the remaining slats easier to align.

Using a rubber mallet, firmly hammer the timber slat into place until it is fully secured.

Ensure that the steel grid is aligned with the first flat surface of the rack to provide maximum stability.

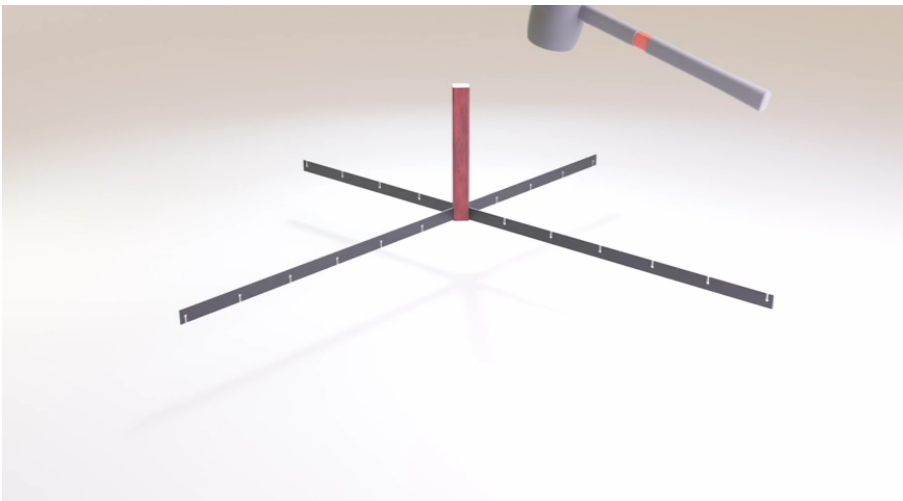


Fig. 1 — The first timber slat, entering the cross metal grid near the centre of the frame and seated with a rubber mallet.

02 ASSEMBLING THE TOP FRAME

Insert one section of the metal frame **only halfway** down into the wood pieces.

Insert the 2nd section of the metal frame into the 1st section, ensuring a secure fit into the wood pieces.

Use the rubber mallet to complete the installation of the metal frame into the wood pieces, ensuring it is tightly in place.

Leaving the first section halfway proud is what lets the second section slide in. Drive it home first and the two will not meet.

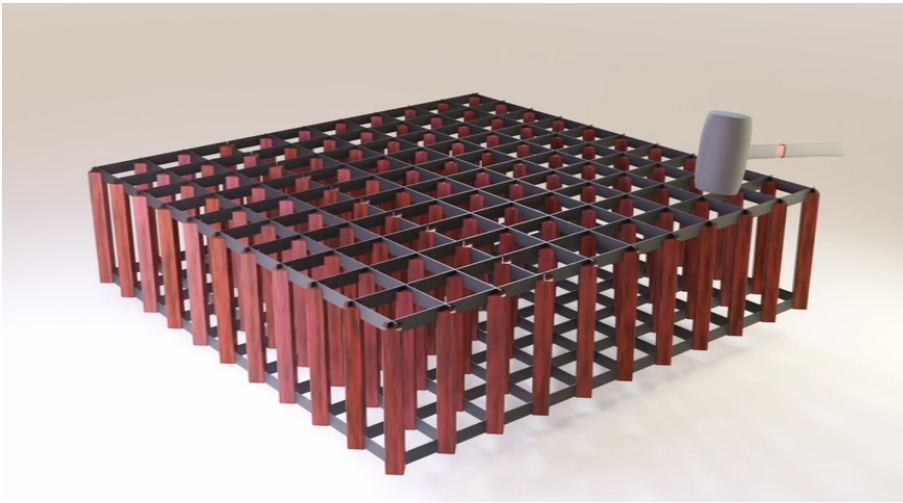


Fig. 2 — Both frame sections engaged and driven down onto the slat ends.

03 NECK PROTECTORS

Snap the bottle neck protectors onto the front side of the metal frame.

This will provide added protection for the necks of your wine bottles and prevent them from accidentally slipping out.

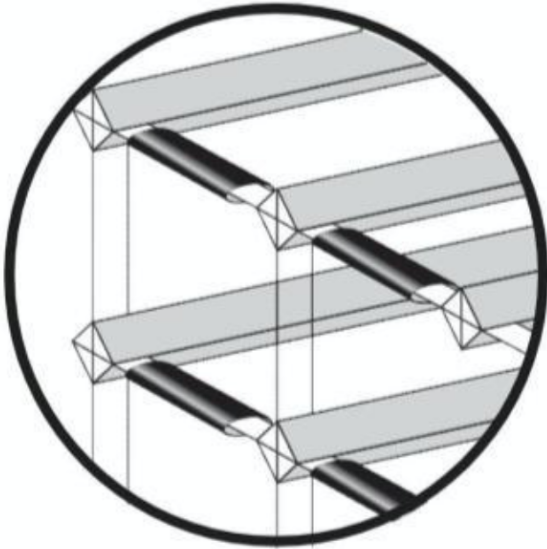


Fig. 3 — Neck protectors sit on the front face, one per bottle position.

PART TWO

Sloped rack

Five steps. The sequence matches the Classic rack, with one difference: the slats are installed from the corner outwards rather than from the centre.

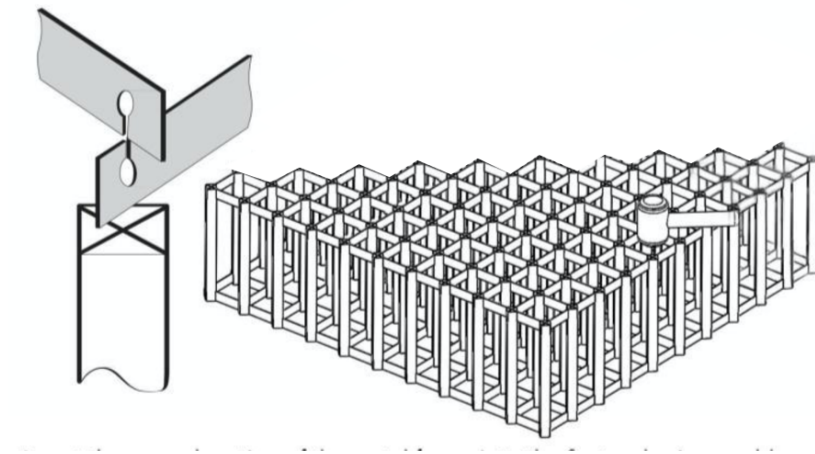


Fig. 4 — The sloped bottom frame. Slat installation starts at the corner, on the longest metal piece.

01 BOTTOM FRAME

Assemble the bottom metal frame on a flat surface.

03 FIRST TOP SECTION

Insert one section of the metal frame **only halfway** down into the wood pieces.

05 NECK PROTECTORS

The bottle neck protectors snap onto the front side of the metal frame.

02 TIMBER SLATS

Line up and insert the wood rack pieces into the metal frame. Use a rubber mallet to install into the metal cross frame. **Start from the corner** — the longest metal piece.

04 SECOND TOP SECTION

Insert the 2nd section of the metal frame into the 1st and, using a rubber mallet, complete the installation into the wood slats.

Sloped SKUs run WRTS04 to WRTS12. Each uses metal pieces MP01 upwards in matched sets — see appendix B.

PART THREE

Joining units into a large rack

A single unit is at most 12 holes in either direction. Anything larger is built from several assembled units placed against each other, so every unit in the wall is finished as a single rack first — Part one or Part two — before any of this applies.

THE THREE CONNECTOR PARTS

All three are ordered separately from the racks. The colours below are the same ones used in the online rack planner, so a plan and this document can be read together.

■ CONNECTOR CLIPS

Plastic. Hold two units in the right position relative to each other. On a stacked join they are the only part used.

■ METAL CONNECTOR PIECES

Steel, 75 × 22.5 mm. Make a side-by-side join structural. Not used on a stacked join.

WALL BRACKETS

237 mm, supplied with plug and screw. Fix the finished rack to the wall. See Part four.

EACH JOIN TAKES ONE LINE OF THE GRID

Two units side by side are separated by a **connector column**: one column of the overall grid that carries the join. It takes bottles like any other column.

Two units stacked are separated by a **connector row**, in the same way.

So a wall 20 holes across is not two units of 10. It is one unit of 10, one connector column, and one unit of 9 — a 20-column footprint. The connector column takes bottles like the rest of the grid, but the rack planner does not count it — it quotes 19 bottle columns, the conservative figure. Plan the space, not the unit count.

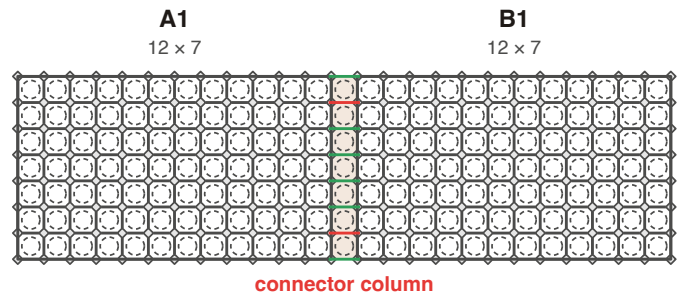


Fig. 5 — The wall drawn as one grid, here at the maximum: 12 + connector column + 12, a 25-column footprint. The tinted column is the connector column, a full column of the grid holding bottles like any other — not a gap between two racks. — a metal connector piece at every node — eight of them here; — the two that also take a clip are drawn red instead, since where both parts meet only the clip is marked. Eight metal pieces and two clips per bar plane.

WHICH CONNECTOR GOES WHERE

JOIN	CONNECTOR	WHERE IT GOES	HOW MANY
Side by side Type H	■ Metal connector pieces, located by ■ clips	The connector column between the two units, over its full height	One metal piece at every node down the column, plus two clips near the ends to fix the units' position. Doubled — front and back bar planes.
Stacked Type V	■ Connector clips only	The connector row between the two units, over its full width	One clip at every node across the row. Doubled — front and back bar planes.
To the wall	Wall brackets with fixings	The front frame, at the corners of each 13-hole module	Four per module. See Part four for the count.

Every quantity is doubled. A rack has two bar planes, one at each end of the 235 mm slat. Whatever a join needs at the front, it needs the same at the back.

THE CONNECTOR CLIP

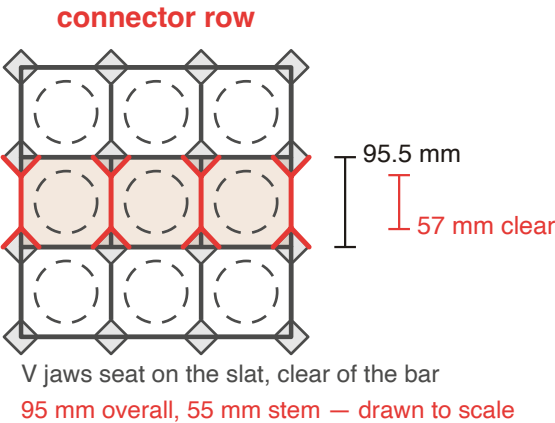


Fig. 6a — How the clip holds. It grips the **timber slat** of each unit across the connector line and stays clear of both bar planes, so it locates the units without carrying load through the bars. One at every node on a stacked join; two per seam on a side-by-side join, where they hold the two units in position while the metal pieces carry the load. Drawn to scale: the clip is 95 mm overall, one node pitch, so its jaws land on the two facing slats.

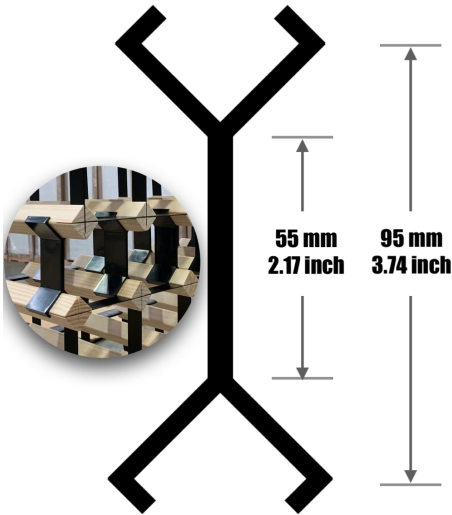


Fig. 6b — The clip itself: **95 mm** overall, with a **55 mm** stem between the two jaw roots. A V at each end seats on the 45° face of one slat, so the clip cradles the slat of each unit and touches no bar.

WORKED EXAMPLE — A WALL 20 HOLES ACROSS, 8 HIGH

Two units, 10 and 9 columns, with one connector column between them. Eight rows is within a single unit, so there is no connector row.

9 nodes down the connector column (8 rows gives 9 nodes), so 9 metal pieces per plane — **18 in total**.

2 clips per plane — **4 in total**.

Two 13-hole modules across, one high — **8 wall brackets**.

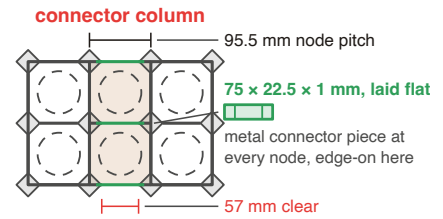


Fig. 7 — A metal connector piece at every node down the connector column, in the plane of the bars. The piece is flat, so edge-on it reads as a line of the same 1 mm as the bars it splices: 75 mm across the 95.5 mm node pitch, lapping about 9 mm onto each unit's bar either side of the 57 mm clear gap. The column carries bottles like any other.

PART THREE · TYPE H

Joining two units side by side

Units A1 and B1, both finished as single racks, of equal height.

Work on the front plane first, then repeat everything on the back.

01 Stand the units a connector column apart

Leave a gap of one grid column between A1 and B1. Set it out by node spacing, not by the gap: the outermost node of A1 and the outermost node of B1 must sit **one pitch apart, 95.5 mm** — the same spacing as any two nodes inside a unit. The clear gap between the facing frames then comes out near **57 mm**, which the 75 mm metal piece bridges with bearing at both ends. Use the 57 mm as a check, not as the setting-out figure.

02 Clip near each end of the column

Fit one connector clip at the second node from the top and one at the second node from the bottom. These two hold the units square while the metal goes in; they are not the structure.

03 Fit a metal connector piece at every node

Working down the column, insert one metal connector piece at each node, including the top and bottom. Seven rows means eight nodes, eight pieces — count the nodes in Fig. 5.

04 Repeat on the back plane

Everything in steps 02 and 03 again, on the bar plane at the other end of the slats.

Where the 95.5 mm comes from. It is the nodal pitch — the slot spacing on the metal bars. A rack n holes wide measures $n \times 95.5$ mm plus a 38.2 mm frame allowance overall, 19.1 mm beyond the outermost node at each side. Set out by nodes and the gap follows.

Clips alone will not hold a side-by-side join. A metal piece only slides into the slot in the slat, so it ties the two units without fixing where they sit — stopping the units shifting is the clips' job, and carrying the load is the metal's. Do not load bottles with the clips in and the metal still out.

PART THREE · TYPE V

Stacking two units vertically

Unit A2 goes on top of unit A1, both finished as single racks. A stacked join uses connector clips only — no metal connector pieces.

01 Clip the bottom row of the upper unit

With A2 still on the floor, fit one connector clip at every node along its bottom row — on A2, the unit being lifted, not on the top of A1. Ten columns means eleven nodes, eleven clips — count the nodes in Fig. 8.

02 Lift A2 onto A1

Two people. Bring it down square so every clip engages at once. Racks above roughly 100 bottle positions are heavy enough that this is not a one-person lift.

03 Repeat on the back plane

Fit the same run of clips on the rear bar plane.

04 Fix to the wall before loading

A stacked rack must be bracketed to the wall — it is the tall narrow case in its worst form. See Part four.

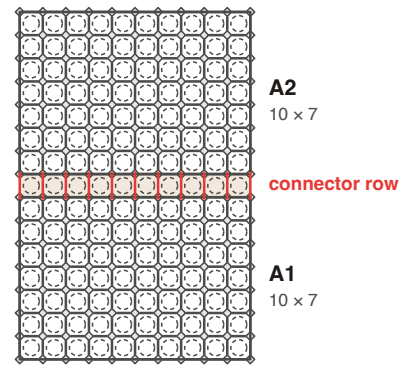


Fig. 8 — one clip at every node along the connector row — a full row of the grid, holding bottles like any other row. No metal pieces on a stacked join.

PART THREE • TYPE H + TYPE V

Four units in a two by two block

A1 and B1 on the bottom, A2 and B2 on top. Letters run left to right, numbers bottom to top. Units in the same row must be the same height; their widths may differ.

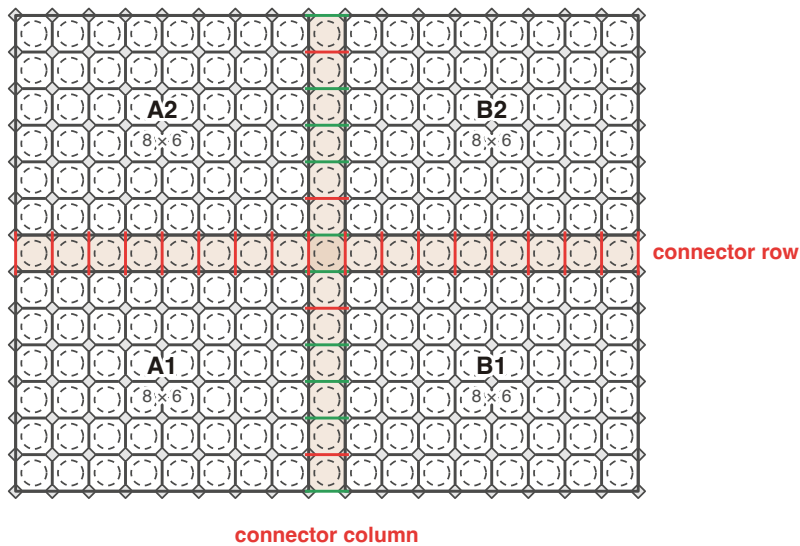


Fig. 9 — The block as one grid. The tinted column and row carry the joins and still hold bottles:  a metal connector piece at every node down the column,  a clip at every node along the row. The column is two side-by-side seams, upper and lower, and each takes two alignment clips — drawn red, since where a clip and a metal piece share a node only the clip is marked. All doubled, front and back.

SEQUENCE

01 Build all four units

Each one finished as a single rack, using Part one or Part two.

02 Join the bottom pair side by side

A1 to B1, following Type H in full — both planes.

03 Join the top pair side by side, on the floor

A2 to B2, also following Type H in full. Joining them before lifting is easier and squarer than joining them overhead.

04 Clip the underside of the top pair

One clip at every node along the bottom row of the joined A2–B2 assembly, both planes, following Type V.

05 Lift the top pair into place

Two people, at least. Bring it down square.

06 Bracket to the wall, then load

See Part four.

COUNTING A BLOCK

Add the seams up. A block of four has two side-by-side seams (one in the bottom row, one in the top) and one stacked seam running the full width.

Each side-by-side seam: one metal piece per node down its height, two clips, doubled. The stacked seam: one clip per node across the full width of the block, doubled. Wall brackets follow the module rule in Part four, counted over the whole block, not per unit.

PART FOUR

Wall brackets

Wall brackets tie the rack back to the adjacent wall. They are not needed on every rack.

WHEN YOU NEED THEM

Most single racks do not need wall brackets. The rack stands on the floor and the floor carries the weight. Fit them where the rack can rock: anything from about **8 × 8 holes** upwards, and any tall narrow rack — a **1 × 7** is the clear case.

Every joined wall is past that threshold, so **bracket every joined assembly**. Brackets are ordered separately from the racks.

LENGTH

237 mm

9.33 inch

HOW MANY

A single unit: four brackets, one at each corner of the front frame.

A joined wall: four per 13-hole module, one at each corner. Count the modules across and up over the whole wall, not per unit: a wall 20 holes across and 8 high is two modules across and one high, so eight brackets.



Fig. 10 — The bracket, drawn from the part drawing. Side elevation above, wall plate seen face on below.

DIMENSIONS

237 mm overall, 22.5 mm wide, 1 mm thick. The wall plate stands 26 mm up with a Ø6 mm fixing hole. Black powder coated.

WHICH WAY ROUND

The bracket goes **inside a bay**, in the open space between two slat courses — not on top of the rack. The plate with the hole faces the wall; the strap runs the full 235 mm depth and the folded hem at the far end hooks up over the **front vertical metal bar**, the bar sitting in the 3.8 mm gap of the fold. The bracket grips that bar; it does not rest on the timber.

01 MARK

Move the wine racks to the desired location. Mark the position where the wall brackets will be installed.

03 SEAT

Feed the strap into the bay between two slat courses, hem first, and lift it so the fold hooks up over the front vertical metal bar. Then bring the wall plate against the marked hole.

02 DRILL AND PLUG

Drill the holes in the wall, then insert only the plastic portion.

04 SCREW IN

Screw in. Check the rack cannot be rocked away from the wall before loading it.

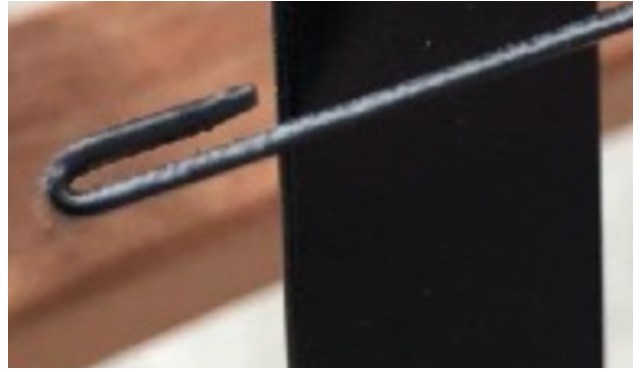
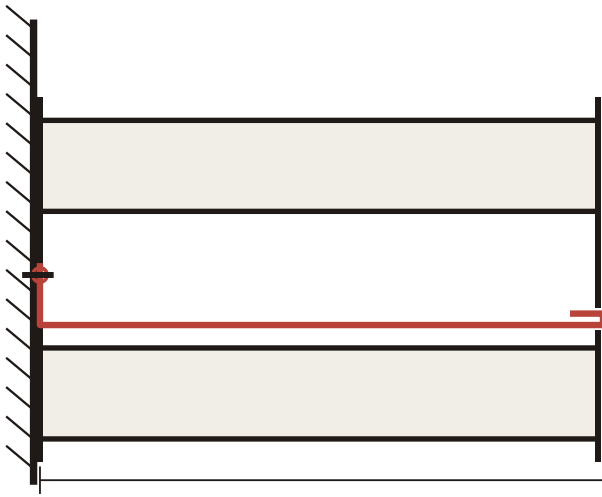


Fig. 11 — Left: rack seen from the side. The plate screws to the wall and the strap lies in the open bay between two slat courses, running the full 235 mm depth; both planes carry a vertical bar, and the front bar is shown broken where the strap passes in front of it. Right: the folded end hooked onto the edge of the front vertical bar. Slat courses are 38 mm deep on a 95.5 mm pitch; the dimension is the bracket, 237 mm.

PART FIVE

If something does not fit

BUILDING ONE UNIT

The rack rocks or a corner lifts off the floor

The floor is uneven, or one slat is not fully seated. Take the bottles out, go along every slat with the mallet and drive any proud slat home. If the rack still rocks, the floor is the cause — fit the wall brackets, which pull the frame true.

A timber slat will not go into the grid

Check the slat is square to the grid before striking it — the notch has to meet the steel flat. Do not force a slat that has gone in at an angle: back it out and start it again. Timber swells slightly in humid weather; a firmer tap with the rubber mallet is normal, more force is not.

The second top frame section will not enter the first

The first section has been driven too far down. Lift it back to roughly halfway, engage the second section, then drive both down together.

Neck protectors keep coming off

They clip onto the front face of the metal frame only, and go on after the frame is fully seated. If the frame is still proud of the slats they have nothing to grip.

A part is missing or damaged

Count what you have against the bill of materials for your size in the appendices, then contact us with the rack size and the part reference. Metal pieces are identified MP01 to MP12.

JOINING UNITS

The metal connector piece will not slide in

The connector column is the wrong width. Measure node to node across the gap: it must be one pitch, 95.5 mm, the same as any two nodes inside a unit. Too wide and the 75 mm piece has nothing to bear on; too narrow and it will not enter. Set the units by node spacing, not by eye.

The two units will not sit at the same height

Units in the same row must be the same number of rows tall. Check the row count of each — a wall can mix widths freely, but not heights within a row. If the counts match and the tops still differ, the floor is uneven; shim the low unit before joining, not after.

Clips on a stacked join miss their nodes

The upper unit came down out of square, so some clips engaged and others slipped past. Lift it clear, check that every clip is still seated on the lower row of the upper unit, and bring it down level — two people, one at each end, lowering together.

A stacked join feels loose, or a clip pops out under load

Either a node was skipped or only one bar plane was clipped. Unload, and count the clips on both planes: a seam n columns wide needs $n+1$ clips per plane. A stacked join has no metal pieces, so a missing clip has nothing backing it up.

A side-by-side join flexes when the rack is loaded

The clips are in but the metal connector pieces are not, or are missing from the rear plane. Unload and count: a seam n rows tall needs $n+1$ metal pieces per plane, both planes. Clips locate a side-by-side join; the metal carries it.

The finished wall is wider than the space

Each join adds one grid column, so the footprint grows by 95.5 mm per join. A wall of n grid columns measures $n \times 95.5$ mm plus 38.2 mm. Recount including every connector column and row before moving units into a tight alcove.

AUSTRALIA

1300 008 111

hello@kingsbottle.com.au

kingsbottle.com.au/pages/support

UNITED STATES

800-419-8183

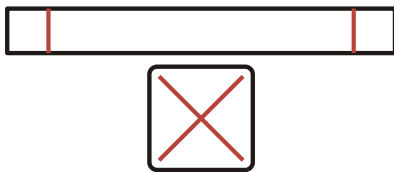
hello@kingsbottle.com

Monday to Friday, 8:00 to 16:30 PST

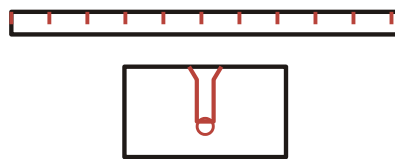
APPENDIX A

Classic rack bill of materials

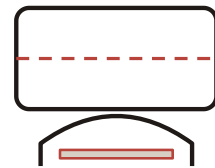
Find your rack size in the first column — the grid, counted as holes across by rows up. Bottle capacity is the neck protector count, one per bottle. MP01 to MP12 are the metal bars, numbered by the span they cross: a bar listed under MP04 crosses four holes. The remaining columns give the quantity of each part; a blank cell means that part is not used in your size.



TIMBER SLAT



METAL BAR MP01-MP12



NECK PROTECTOR

W×H	TIMBER SLAT	NECK PROT.	MP01	MP02	MP03	MP04	MP05	MP06	MP07	MP08	MP09	MP10	MP11	MP12
1x1	4	2	8											
1x2	6	3	6	4										
1x3	8	4	8		4									
1x4	10	5	10			4								
1x5	12	6	12				4							
1x6	14	7	14					4						
1x7	16	8	16						4					
1x8	18	9	18							4				
1x9	20	10	20								4			
1x10	22	11	22									4		
1x11	24	12	24										4	
1x12	26	13	26											4
2x1	6	4	6	4										
2x2	9	6		12										
2x3	12	8		8	6									
2x4	15	10		10		6								
2x5	18	12		12			6							
2x6	21	14		14				6						
2x7	24	16		16					6					
2x8	27	18		18						6				
2x9	30	20		20							6			
2x10	33	22		22								6		
2x11	36	24		24									6	
2x12	39	26		26										6
3x1	8	6	8		4									
3x2	12	9		8	6									
3x3	16	12			16									
3x4	20	15			10	8								
3x5	24	18			12		8							
3x6	28	21			14			8						

W×H	TIMBER SLAT	NECK PROT.	MP01	MP02	MP03	MP04	MP05	MP06	MP07	MP08	MP09	MP10	MP11	MP12
3x7	32	24			16				8					
3x8	36	27			18					8				
3x9	40	30			20						8			
3x10	44	33			22							8		
3x11	48	36			24								8	
3x12	52	39			26									8
4x1	10	8	10			4								
4x2	15	12		10		6								
4x3	20	16			10	8								
4x4	25	20				20								
4x5	30	24				12	10							
4x6	35	28				14		10						
4x7	40	32				16			10					
4x8	45	36				18				10				
4x9	50	40				20					10			
4x10	55	44				22						10		
4x11	60	48				24							10	
4x12	65	52				26								10
5x1	12	10	12				4							
5x2	18	15		12			6							
5x3	24	20			12		8							
5x4	30	25				12	10							
5x5	36	30					24							
5x6	42	35					14	12						
5x7	48	40					16		12					
5x8	54	45					18			12				
5x9	60	50					20				12			
5x10	66	55					22					12		
5x11	72	60					24						12	
5x12	78	65					26							12
6x1	14	12	14					4						
6x2	21	18		14				6						
6x3	28	24			14			8						
6x4	35	30				14		10						
6x5	42	36					14	12						
6x6	49	42						28						
6x7	56	48						16	14					
6x8	63	54						18		14				
6x9	70	60						20			14			
6x10	77	66						22				14		
6x11	84	72						24					14	
6x12	91	78						26						14
7x1	16	14	16						4					
7x2	24	21		16					6					
7x3	32	28			16				8					
7x4	40	35				16			10					
7x5	48	42					16		12					
7x6	56	49						16	14					
7x7	64	56							32					
7x8	72	63							18	16				
7x9	80	70							20		16			
7x10	88	77							22			16		

W×H	TIMBER SLAT	NECK PROT.	MP01	MP02	MP03	MP04	MP05	MP06	MP07	MP08	MP09	MP10	MP11	MP12
7x11	96	84							24				16	
7x12	104	91							26					16
8x1	18	16	18							4				
8x2	27	24		18						6				
8x3	36	32			18					8				
8x4	45	40				18				10				
8x5	54	48					18			12				
8x6	63	56						18		14				
8x7	72	64							18	16				
8x8	81	72								36				
8x9	90	80								20	18			
8x10	99	88								22		18		
8x11	108	96								24			18	
8x12	117	104								26				18
9x1	20	18	20								4			
9x2	30	27		20							6			
9x3	40	36			20						8			
9x4	50	45				20					10			
9x5	60	54					20				12			
9x6	70	63						20			14			
9x7	80	72							20		16			
9x8	90	81								20	18			
9x9	100	90									40			
9x10	110	99									22	20		
9x11	120	108									24		20	
9x12	130	117									26			20
10x1	22	20	22									4		
10x2	33	30		22								6		
10x3	44	40			22							8		
10x4	55	50				22						10		
10x5	66	60					22					12		
10x6	77	70						22				14		
10x7	88	80							22			16		
10x8	99	90								22		18		
10x9	110	100									22	20		
10x10	121	110										44		
10x11	132	120										24	22	
10x12	143	130										26		22
11x1	24	22	24										4	
11x2	36	33		24									6	
11x3	48	44			24								8	
11x4	60	55				24							10	
11x5	72	66					24						12	
11x6	84	77						24					14	
11x7	96	88							24				16	
11x8	108	99								24			18	
11x9	120	110									24		20	
11x10	132	121										24	22	
11x11	144	132											48	
11x12	156	143												24
12x1	26	24	26											4
12x2	39	36		26										6

W×H	TIMBER SLAT	NECK PROT.	MP01	MP02	MP03	MP04	MP05	MP06	MP07	MP08	MP09	MP10	MP11	MP12
12x3	52	48			26									8
12x4	65	60				26								10
12x5	78	72					26							12
12x6	91	84						26						14
12x7	104	96							26					16
12x8	117	108								26				18
12x9	130	120									26			20
12x10	143	132										26		22
12x11	156	144											26	24
12x12	169	156												52

APPENDIX B

Sloped rack bill of materials

Sloped racks are identified by SKU rather than by width and height.

SKU	TIMBER SLAT	NECK PROT.	MP01	MP02	MP03	MP04	MP05	MP06	MP07	MP08	MP09	MP10	MP11	MP12
WRTS04	19	14	4	4	4	8								
WRTS05	26	20	4	4	4	4	8							
WRTS06	34	27	4	4	4	4	4	8						
WRTS07	43	35	4	4	4	4	4	4	8					
WRTS08	53	44	4	4	4	4	4	4	4	8				
WRTS09	64	54	4	4	4	4	4	4	4	4	8			
WRTS10	76	65	4	4	4	4	4	4	4	4	4	8		
WRTS11	89	77	4	4	4	4	4	4	4	4	4	4	8	
WRTS12	103	90	4	4	4	4	4	4	4	4	4	4	4	8

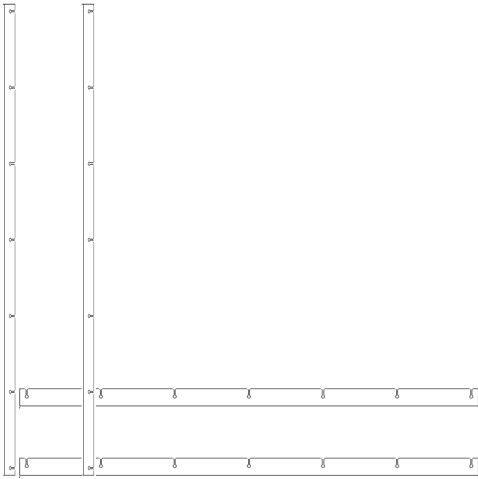


Fig. 12 — Metal pieces are supplied in matched lengths. Sort them before you begin.

PARTS ORDERED SEPARATELY

Connector clips — one per node along a stacked join, two per seam on a side-by-side join.

Metal connector pieces — one per node down a side-by-side join, none on a stacked join.

Wall brackets with fixings — four per unit, or four per 13-hole module on a joined wall.

Rubber mallet.

Order from kingsbottle.com or kingsbottle.com.au. Every join quantity is doubled for the front and back bar planes; the rules above give one join, so multiply by the number of joins in your layout — one for every pair of units that meets, side by side or stacked.