Steel estimate report

Pipe rack · package 1 (zones 2 & 3) · 11/17/2026 · engine v298

Material by assembly — cut, drill, weld by fillet size

Assembly	What	Pieces to cut	Holes to drill	Weld 6 mm (in)	Weld 8 mm (in)	Shop weld (in)	Weight (kg)
PR-A-B-1	BEAM	8	0	59.0	—	59.0	244
PR-A-B-2 (1 of 2)	BEAM	7	0	41.3	—	41.3	218
PR-A-B-2 (2 of 2)	BEAM	7	0	41.3	—	41.3	218
PR-A-B-3 (1 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (2 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (3 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (4 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (5 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (6 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (7 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (8 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (9 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (10 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (11 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (12 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (13 of 14)	BEAM	3	0	11.8	—	11.8	22
PR-A-B-3 (14 of 14)	BEAM	3	0	11.8	—	11.8	22
TOTAL (127 assemblies)		**379**	**84**	**1,427.8**	**1,465.8**	**2,893.6**	

Assembly	What	Pieces to cut	Holes to drill	Weld 6 mm (in)	Weld 8 mm (in)	Shop weld (in)	Weight (kg)
PR-A-CO-1 (1 of 4)	COLUMN	3	4	—	69.8	69.8	89
PR-A-CO-1 (2 of 4)	COLUMN	3	4	—	69.8	69.8	89
PR-A-CO-1 (3 of 4)	COLUMN	3	4	—	69.8	69.8	89
PR-A-CO-1 (4 of 4)	COLUMN	3	4	—	69.8	69.8	89
PR-B-B-1	BEAM	8	0	59.0	—	59.0	224
PR-B-B-2	BEAM	3	0	11.8	—	11.8	22
PR-B-B-3 (1 of 8)	BEAM	3	0	11.8	—	11.8	20
PR-B-B-3 (2 of 8)	BEAM	3	0	11.8	—	11.8	20
PR-B-B-3 (3 of 8)	BEAM	3	0	11.8	—	11.8	20
PR-B-B-3 (4 of 8)	BEAM	3	0	11.8	—	11.8	20
PR-B-B-3 (5 of 8)	BEAM	3	0	11.8	—	11.8	20
PR-B-B-3 (6 of 8)	BEAM	3	0	11.8	—	11.8	20
PR-B-B-3 (7 of 8)	BEAM	3	0	11.8	—	11.8	20
PR-B-B-3 (8 of 8)	BEAM	3	0	11.8	—	11.8	20
PR-B-B-4	BEAM	6	0	35.4	—	35.4	165
PR-B-B-5	BEAM	6	0	41.3	—	41.3	127
PR-B-B-6	BEAM	1	0	—	—	0.0	23
PR-B-B-8	BEAM	2	0	5.9	—	5.9	17
PR-B-B-9	BEAM	3	0	11.8	—	11.8	23
PR-B-B-10	BEAM	2	0	5.9	—	5.9	18
PR-B-CO-2 (1 of 5)	COLUMN	3	4	—	69.8	69.8	90
TOTAL (127 assemblies)		**379**	**84**	**1,427.8**	**1,465.8**	**2,893.6**	

Assembly	What	Pieces to cut	Holes to drill	Weld 6 mm (in)	Weld 8 mm (in)	Shop weld (in)	Weight (kg)
PR-B-CO-2 (2 of 5)	COLUMN	3	4	—	69.8	69.8	90
PR-B-CO-2 (3 of 5)	COLUMN	3	4	—	69.8	69.8	90
PR-B-CO-2 (4 of 5)	COLUMN	3	4	—	69.8	69.8	90
PR-B-CO-2 (5 of 5)	COLUMN	3	4	—	69.8	69.8	90
PR-B-CO-3 (1 of 2)	COLUMN	3	4	—	69.8	69.8	104
PR-B-CO-3 (2 of 2)	COLUMN	3	4	—	69.8	69.8	104
PR-C-B-1	BEAM	1	0	—	—	0.0	23
PR-C-B-2 (1 of 4)	BEAM	3	0	11.8	—	11.8	24
PR-C-B-2 (2 of 4)	BEAM	3	0	11.8	—	11.8	24
PR-C-B-2 (3 of 4)	BEAM	3	0	11.8	—	11.8	24
PR-C-B-2 (4 of 4)	BEAM	3	0	11.8	—	11.8	24
PR-C-B-3	BEAM	6	0	23.6	—	23.6	209
PR-C-B-4	BEAM	3	0	11.8	—	11.8	22
PR-C-CO-1 (1 of 2)	COLUMN	3	4	—	69.8	69.8	105
PR-C-CO-1 (2 of 2)	COLUMN	3	4	—	69.8	69.8	105
PR-D-B-1 (1 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (2 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (3 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (4 of 32)	BEAM	1	0	—	—	0.0	13
TOTAL (127 assemblies)		**379**	**84**	**1,427.8**	**1,465.8**	**2,893.6**	

Assembly	What	Pieces to cut	Holes to drill	Weld 6 mm (in)	Weld 8 mm (in)	Shop weld (in)	Weight (kg)
PR-D-B-1 (5 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (6 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (7 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (8 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (9 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (10 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (11 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (12 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (13 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (14 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (15 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (16 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (17 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (18 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (19 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (20 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (21 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (22 of 32)	BEAM	1	0	—	—	0.0	13
TOTAL (127 assemblies)		**379**	**84**	**1,427.8**	**1,465.8**	**2,893.6**	

Assembly	What	Pieces to cut	Holes to drill	Weld 6 mm (in)	Weld 8 mm (in)	Shop weld (in)	Weight (kg)
PR-D-B-1 (23 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (24 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (25 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (26 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (27 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (28 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (29 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (30 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (31 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-B-1 (32 of 32)	BEAM	1	0	—	—	0.0	13
PR-D-F-1 (1 of 5)	FRAME	5	0	53.1	—	53.1	141
PR-D-F-1 (2 of 5)	FRAME	5	0	53.1	—	53.1	141
PR-D-F-1 (3 of 5)	FRAME	5	0	53.1	—	53.1	141
PR-D-F-1 (4 of 5)	FRAME	5	0	53.1	—	53.1	141
PR-D-F-1 (5 of 5)	FRAME	5	0	53.1	—	53.1	141
PR-D-F-2 (1 of 4)	FRAME	6	0	23.6	—	23.6	186
PR-D-F-2 (2 of 4)	FRAME	6	0	23.6	—	23.6	186
PR-D-F-2 (3 of 4)	FRAME	6	0	23.6	—	23.6	186
TOTAL (127 assemblies)		**379**	**84**	**1,427.8**	**1,465.8**	**2,893.6**	

Assembly	What	Pieces to cut	Holes to drill	Weld 6 mm (in)	Weld 8 mm (in)	Shop weld (in)	Weight (kg)
PR-D-F-2 (4 of 4)	FRAME	6	0	23.6	—	23.6	186
PR-D-F-3 (1 of 4)	FRAME	6	0	23.6	—	23.6	186
PR-D-F-3 (2 of 4)	FRAME	6	0	23.6	—	23.6	186
PR-D-F-3 (3 of 4)	FRAME	6	0	23.6	—	23.6	186
PR-D-F-3 (4 of 4)	FRAME	6	0	23.6	—	23.6	186
PR-E-B-1 (1 of 2)	BEAM	1	0	—	—	0.0	23
PR-E-B-1 (2 of 2)	BEAM	1	0	—	—	0.0	23
PR-E-B-2 (1 of 3)	BEAM	3	0	11.8	—	11.8	24
PR-E-B-2 (2 of 3)	BEAM	3	0	11.8	—	11.8	24
PR-E-B-2 (3 of 3)	BEAM	3	0	11.8	—	11.8	24
PR-E-B-3	BEAM	5	0	17.7	—	17.7	172
PR-E-B-4 (1 of 2)	BEAM	3	0	11.8	—	11.8	22
PR-E-B-4 (2 of 2)	BEAM	3	0	11.8	—	11.8	22
PR-E-CO-1 (1 of 4)	COLUMN	3	4	—	69.8	69.8	105
PR-E-CO-1 (2 of 4)	COLUMN	3	4	—	69.8	69.8	105
PR-E-CO-1 (3 of 4)	COLUMN	3	4	—	69.8	69.8	105
PR-E-CO-1 (4 of 4)	COLUMN	3	4	—	69.8	69.8	105
PR-F-B-1 (1 of 4)	FRAME	3	0	11.8	—	11.8	20
PR-F-B-1 (2 of 4)	FRAME	3	0	11.8	—	11.8	20
TOTAL (127 assemblies)		**379**	**84**	**1,427.8**	**1,465.8**	**2,893.6**	

Assembly	What	Pieces to cut	Holes to drill	Weld 6 mm (in)	Weld 8 mm (in)	Shop weld (in)	Weight (kg)
PR-F-B-1 (3 of 4)	FRAME	3	0	11.8	—	11.8	20
PR-F-B-1 (4 of 4)	FRAME	3	0	11.8	—	11.8	20
PR-F-B-2	FRAME	6	0	47.2	—	47.2	158
PR-F-CO-1 (1 of 2)	COLUMN	3	4	—	69.8	69.8	75
PR-F-CO-1 (2 of 2)	COLUMN	3	4	—	69.8	69.8	75
PR-G-B-1 (1 of 7)	BEAM	3	0	11.8	—	11.8	20
PR-G-B-1 (2 of 7)	BEAM	3	0	11.8	—	11.8	20
PR-G-B-1 (3 of 7)	BEAM	3	0	11.8	—	11.8	20
PR-G-B-1 (4 of 7)	BEAM	3	0	11.8	—	11.8	20
PR-G-B-1 (5 of 7)	BEAM	3	0	11.8	—	11.8	20
PR-G-B-1 (6 of 7)	BEAM	3	0	11.8	—	11.8	20
PR-G-B-1 (7 of 7)	BEAM	3	0	11.8	—	11.8	20
PR-G-B-2	BEAM	9	0	64.9	—	64.9	285
PR-G-CO-1 (1 of 2)	COLUMN	3	4	—	69.8	69.8	75
PR-G-CO-1 (2 of 2)	COLUMN	3	4	—	69.8	69.8	75
TOTAL (127 assemblies)		**379**	**84**	**1,427.8**	**1,465.8**	**2,893.6**	

Cut and drill — by shape

Shape	Pieces	Cut in	Holes / pc	Total holes
C150*75*6.5*10 Channel	69	3,187.8	0	**0**
H150*150*7*10 Beam	31	2,163.8	0	**0**
L75*75*9 Angle	237	5,593.2	0	**0**
TOTAL		**13,980.3 in**		**84**

Shape	Pieces	Cut in	Holes / pc	Total holes
PL20*180 Plate	22	1,315.6	0	**0**
PL20*250 Plate	21	1,719.9	4	**84**
TOTAL		**13,980.3 in**		**84**

Weld to join the assemblies into modules — field / erection weld

Module	Assemblies	Field weld to join (in)	View
PR-A	21	646.0	no 3D model
PR-B	23	843.6	no 3D model
PR-C	9	258.6	no 3D model
PR-D	45	1317.6	no 3D model
PR-E	12	433.6	no 3D model
PR-F	7	199.6	no 3D model
PR-G	10	270.4	no 3D model
TOTAL FIELD WELD (whole project)	**127**	**3,969.4 in**	

Modules are the project's natural fabrication units (grouped by mark prefix, e.g. the racks). This is the whole-project field weld — no install packages need to be built to get it.

By your install packages (IWPs)

Package	Built	Assemblies	Field weld (in)
SP-001 Module PR-A	Shop preassembly	21	646.0
SP-002 Module PR-B	Shop preassembly	23	843.6
SP-003 Module PR-C	Shop preassembly	9	258.6
SP-004 Module PR-D	Shop preassembly	45	1317.6
SP-005 Module PR-E	Shop preassembly	12	433.6
SP-006 Module PR-F	Shop preassembly	7	199.6
SP-007 Module PR-G	Shop preassembly	10	270.4

Install packages (IWPs) are planned in Fabrimap once licensed; this breaks the field weld down per package you build.

379 pieces to cut **13,980.3** cut in **84** holes to drill **2,893.6** in shop weld **3,969.4** in field weld

6863 in total weld

Material — steel to buy, priced by section

Steel is bought by weight. Enter **$ / kg** for each section — the client can adjust any (plate usually costs more per kg than sections). Length and weight come from the model; cost = weight × your rate.

Profile	Grade	Pieces	Length (m)	Weight (kg)	$ / kg	Cost
C150*75*6.5*10	SS400	69	177.8	3,236	$ 1.25	**$4,045**
H150*150*7*10	SS400	31	69.7	2,138	$ 1.25	**$2,673**
L75*75*9	SS400	237	198.5	1,977	$ 1.25	**$2,471**
PL20*180	SS400	22	4	112	$ 1.25	**$140**
PL20*250	SS400	21	5.3	206	$ 1.25	**$258**
TOTAL			**455.3**	**7,669**		**$9,586**

Estimate — output per hour × your labour rate

Each line is **quantity ÷ what a crew does in an hour** (holes an hour, inches of weld an hour, m² an hour, pieces handled an hour); erection stays hours per tonne. The rates start from your estimating manual — **adjust any**. Labour cost = hours × the labour rate; material is a direct $/kg.

Labour rate: $ 75 / hr

Activity	Quantity	Unit	Rate	Hours	Cost
Cut beam (saw)	2,163.8	cut in	40 cut in/hr	54.1	**$4,058**
Cut channel (saw)	3,187.8	cut in	60 cut in/hr	53.1	**$3,983**
Cut angle (saw)	5,593.2	cut in	90 cut in/hr	62.1	**$4,658**
Cut plate (burn)	3,035.5	cut in	30 cut in/hr	101.2	**$7,590**
Handle — light, under 50 kg	317	pcs	12 pcs/hr	26.4	**$1,980**
Handle — medium, 50 kg to 500 kg	63	pcs	5 pcs/hr	12.6	**$945**
Drill	84	holes	2.5 holes/hr	33.6	**$2,520**
Shop weld 6 mm	1,427.8	in	41.7 in/hr	34.2	**$2,565**
Shop weld 8 mm	1,465.8	in	33.3 in/hr	44	**$3,300**
Field weld (join into modules)	3,969.4	in	25 in/hr	158.8	**$11,910**
Paint (prep + coats)	223.7	m²	3.3 m²/hr	67.8	**$5,085**
Erect & install (site)	7.66	t	8 hr/t	61.3	**$4,598**
Material	7,664	kg	priced by section above	—	**$9,586**
LABOUR (at $75/hr)				**709.2 hr**	**$53,192**
MATERIAL					**$9,586**
TOTAL ESTIMATE					**$62,778**

Check: 709.2 labour hours on 7.66 t = **92.6 hr/t**. Compare with the factor you hold for this kind of work before you trust the total; if it

falls outside your band, the line responsible is above.

Logistics & price to client

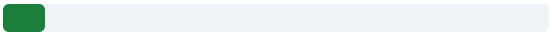
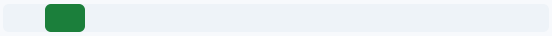
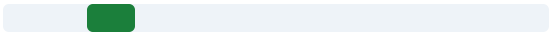
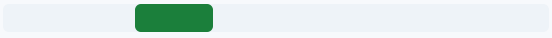
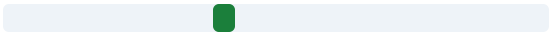
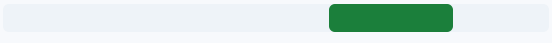
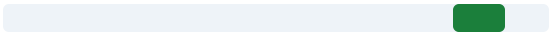
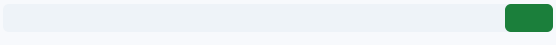
Freight is your delivered-to-site quote. Markup is your pick (this trade runs 35–80%); it applies to labour + material + freight.

Fabrication + install (labour + material)	**$62,778**
Freight to site $ 0	**$0**
Markup 50 %	**$31,389**
PRICE TO CLIENT	**$94,167**

Schedule — crew & duration

Enter the crew and hours per day; each activity's man-hours become crew-days. Activities run **sequentially** (one crew). **Duration = hours ÷ (men × hours/day).**

Crew: 4 men · **Hours/day:** 10 hr

Activity	Man-hours	Crew-days	Timeline
Cut beam (saw)	54.1	1.4	
Cut channel (saw)	53.1	1.3	
Cut angle (saw)	62.1	1.6	
Cut plate (burn)	101.2	2.5	
Handle — light, under 50 kg	26.4	0.7	
Handle — medium, 50 kg to 500 kg	12.6	0.3	
Drill	33.6	0.8	
Shop weld 6 mm	34.2	0.9	
Shop weld 8 mm	44	1.1	
Field weld (join into modules)	158.8	4	
Paint (prep + coats)	67.8	1.7	
Erect & install (site)	61.3	1.5	
TOTAL DURATION		**17.7 days**	**≈ 3.5 weeks (5-day)**