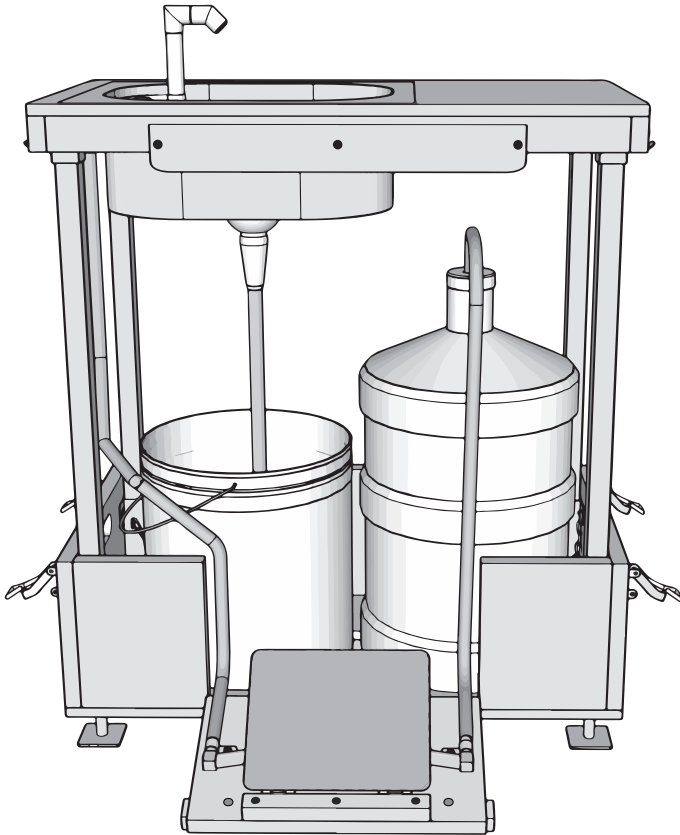




Paul Pholeros
FOUNDATION

PAUL PHOLEROS FOUNDATION

HAND WASH UNIT CONSTRUCTION GUIDE



ABOUT

The Paul Pholeros Foundation hand wash unit has been developed to provide water for hand washing in communities and places where it is not easy to access clean running water.

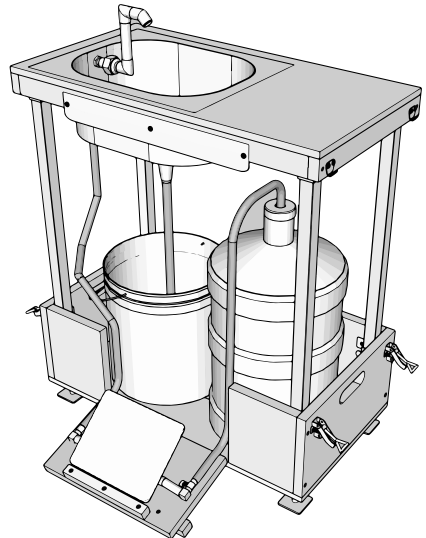
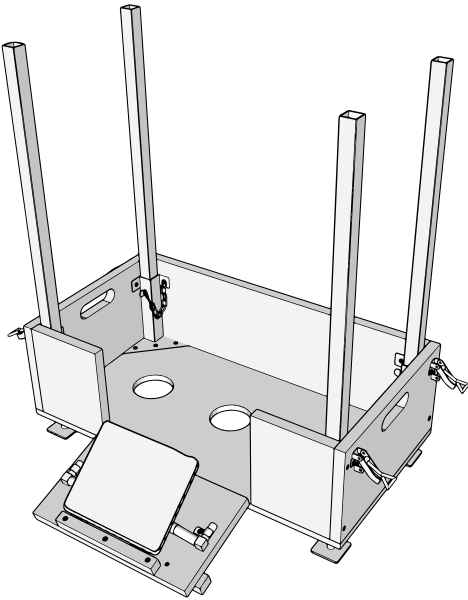
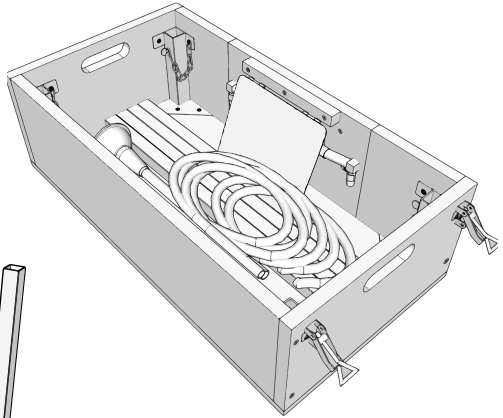
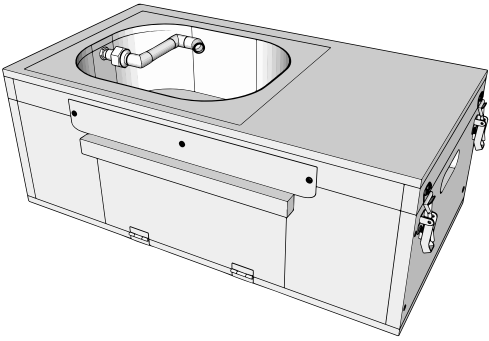
This construction guide provides information and instructions on how to build the hand wash unit.

The Paul Pholeros Foundation is based in Australia and supports projects that improve sanitation and skills development. Further information and contacts are available on the website.

<https://www.ppfoundation.com.au>



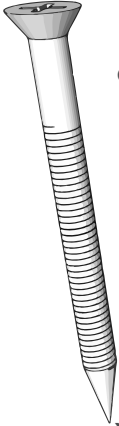
December 2024



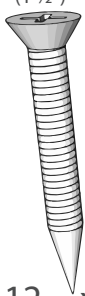
ID	Name	Description	Metric	Imperial	Qty
1	Paint	Enamel paint to protect ply from water damage			1
2	Box Base	12mm ply with drainage holes and foot stud holes cut out	660 x 350mm	2'2" x 1'1 3/4"	1
3	Box side A + C	19mm ply wood with 100 x 30mm handles cut out	350 x 185mm	1'1 3/4" x 7 1/4"	2
4	Box side B	19mm ply wood	622 x 185mm	2' 1/2" x 7 1/4"	1
5	Box side D + F	19mm pl wood	150 x 185mm	7 7/8" x 7 1/4"	2
6	Box side/pump base	19mm ply wood	322 x 185mm	1' 3/8" x 7 1/4"	1
7	Box Hinges				2
8	Tabs	3mm (1/8") thick steel tab welded to bottom leg receivers and screwed to box sides	25 x 25mm	1 x 1"	8
9	Wing bolt				4
10	Chain	Steel chain to secure wing bolt			4
11	Bottom leg receiver	Steel square hollow section welded to triangles	30 x 30 150mm length	1 1/8" x 1 1/8" 6" in length	4
12	Leg prop	Steel hollow section used to lengthen leg	25 x 25 90mm in length	1 x 1" 3 1/2" in length	4
13	M12 Long Nut	Used to support adjustable feet. Welded to triangles.	M12	1/2"	4
14	Triangle	1.2mm (1/16") thick steel sheet triangle	100 x 100mm	4 x 4"	8
15	Foot Stud	Threaded rod	M12 100mm length	1/2" 4" length	4
16	Foot plate	Steel square washer	50 x 50mm	2 x 2"	4
17	Benchtop return	19mm ply wood frame	622 x 50mm 350 x 50mm	2' 1/2" x 2" 1' 5/8" x 2"	1
18	Top leg receiver	Steel square hollow section welded to triangles	30 x 30mm 150mm length	1 1/8" x 1 1/8" 6" in length	4
19	Leg	Steel square hollow section. 615mm in length	25 x 25mm	1 x 1"	4
20	Sink	Steel square sink		15 x 12" external 13 x 10" inner 6" deep	1
21	Steel sheet	Steel sheet to secure foot pump base when disassembled	400 x 50mm	1' 3 3/4" x 2"	1
22	Box lid/bench top	19mm ply wood with hole cut out for 13" x 10" sink	660 x 350mm	2'2" x 1' 3/8"	1
23	Pump base support	25mm timber piece to act as footing when base folds open	25 x 350mm	1" x 13 3/4"	1
24	Pedal support	19mm ply where hinges attach	19 x 200mm	3/4" x 7 7/8"	
25	Pump hinges	Metal hinges			2
26	Foot pedal	12mm ply wood	200 x 160	7 7/8" x 6 1/4"	1
27	Saddle				2
28	Pump	Fuel primer bulb	190mm w/ 10mm hose	7 1/2" w/ 3/8" hose	1
29	Elbows	To fit primer bulb			2
30	Pipe	Clear LPG gas pipe cut in two pieces	10mm x 2m	3/8" x 6'	1
31	Waste fitting	Hard plastic waste fitting			1
32	20L water container	Typical 20L water container with hole in lid, for clean water			1
33	Bucket	Maximum 20L bucket with handle, for waste water			1
34	Tap	Folding PVC pipe tap attached to side of sink			
35	Lock	Over centre locks			4

SCREWS

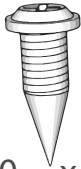
S1.
Counter sunk
10g x 50mm
(2")



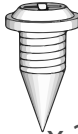
S2.
Counter sunk
10g x 30mm
(1 1/2")



S3.
10g x 16mm
(1 5/8")



S4.
10g x 12mm
(1/2")



S5.
Counter sunk
6g x 16mm
(1 5/8")

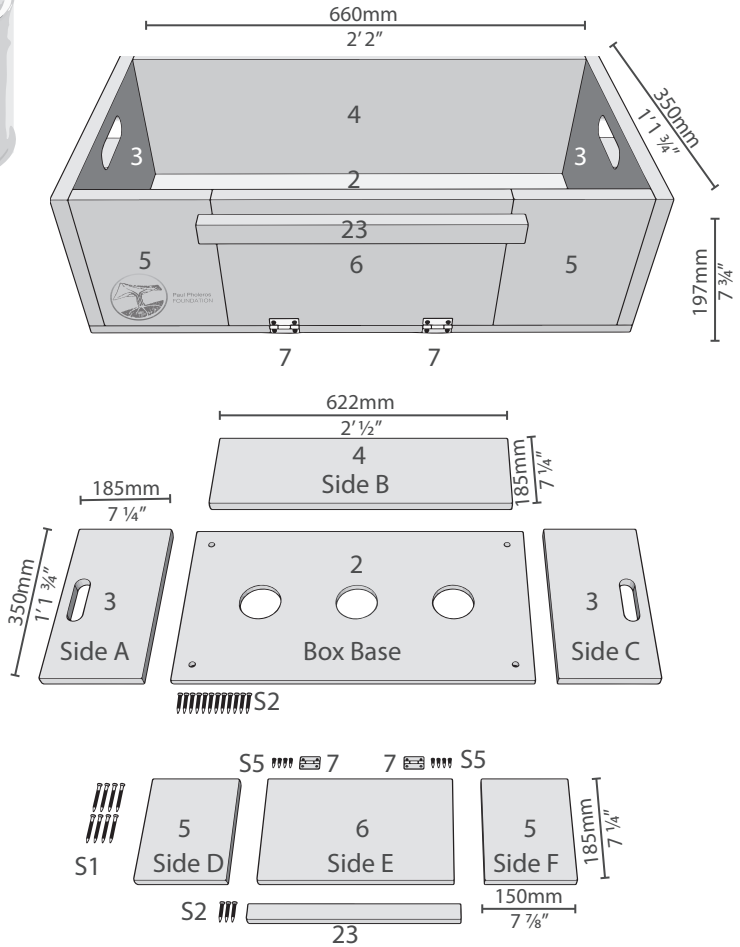


S6.
.18 pop rivet



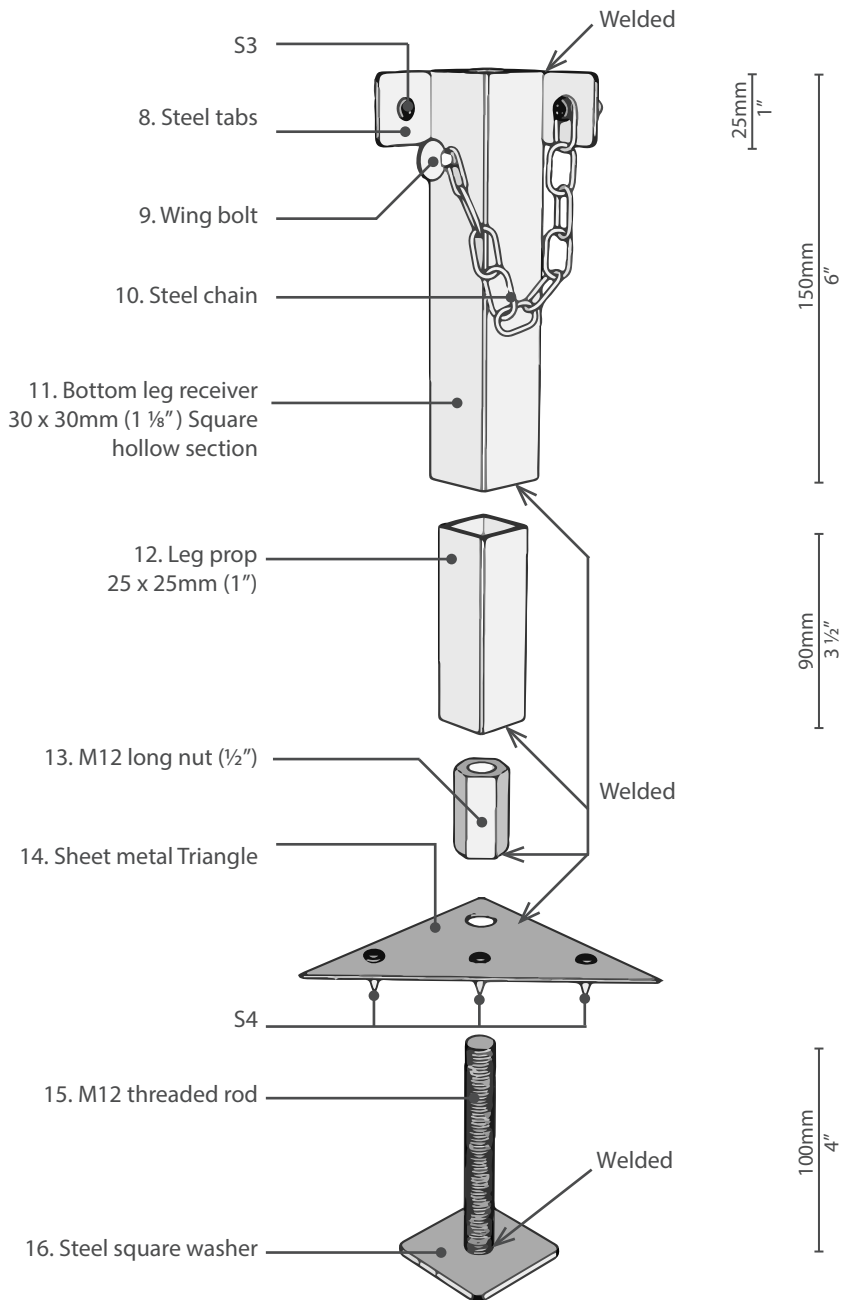


BOX

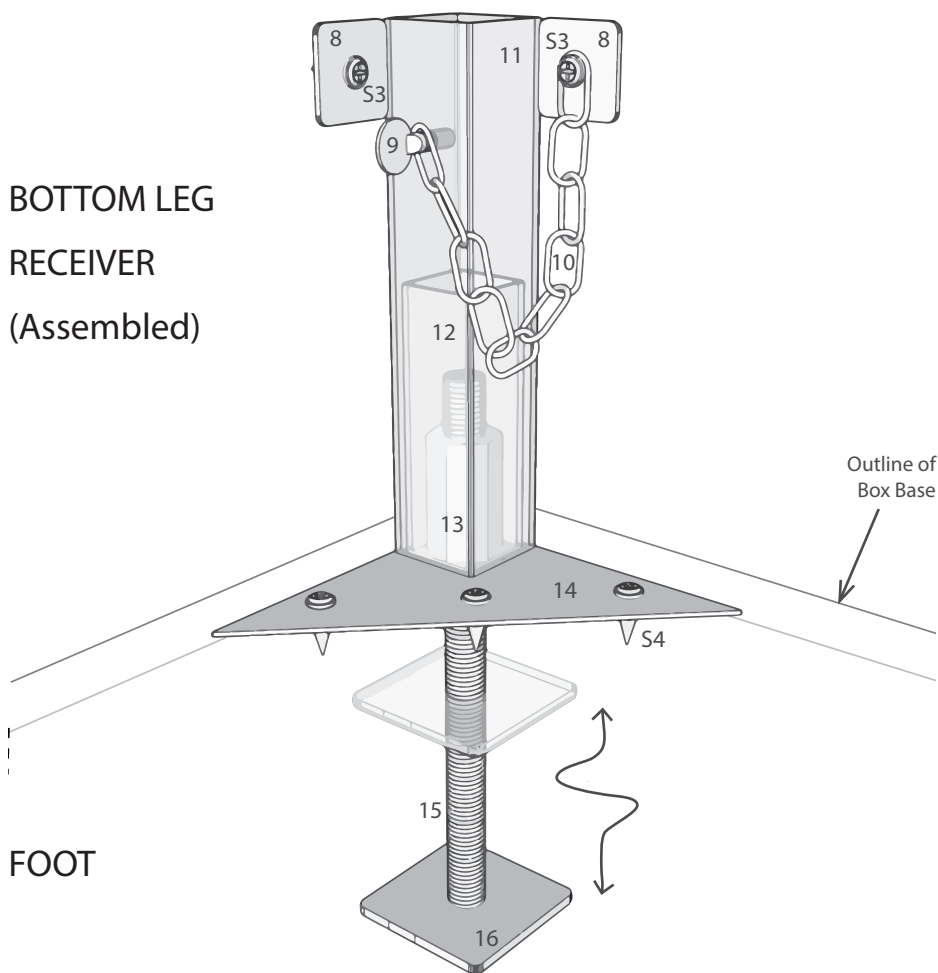


ID	Name	Description	Metric	Imperial
1	Paint	2x coats of enamel paint to protect ply from water damage		
2	Box Base	12mm ply with drainage holes and foot stud holes cut out	660 x 350mm	2'2" x 1'1 3/4"
3	Box side A + C	19mm ply wood with 100 x 30mm handles cut out	350 x 185mm	1'1 3/4" x 7 1/4"
4	Box side B	19mm ply wood	622 x 185mm	2'1/2" x 7 1/4"
5	Box side D + F	19mm pl wood	150 x 185mm	7 7/8" x 7 1/4"
6	Side E/Pump Base	19mm ply wood	322 x 185mm	1'5/8" x 7 1/4"
7	Box Hinges	2 hinges to attach Side E/pump Base to Box Base	25 x 330mm	1" x 13"
23	Pump Base Support	25mm piece of timber to act as footing when base folds open	25 x 350 mm	1" x 13 3/4"

BOTTOM LEG RECEIVER (Exploded)



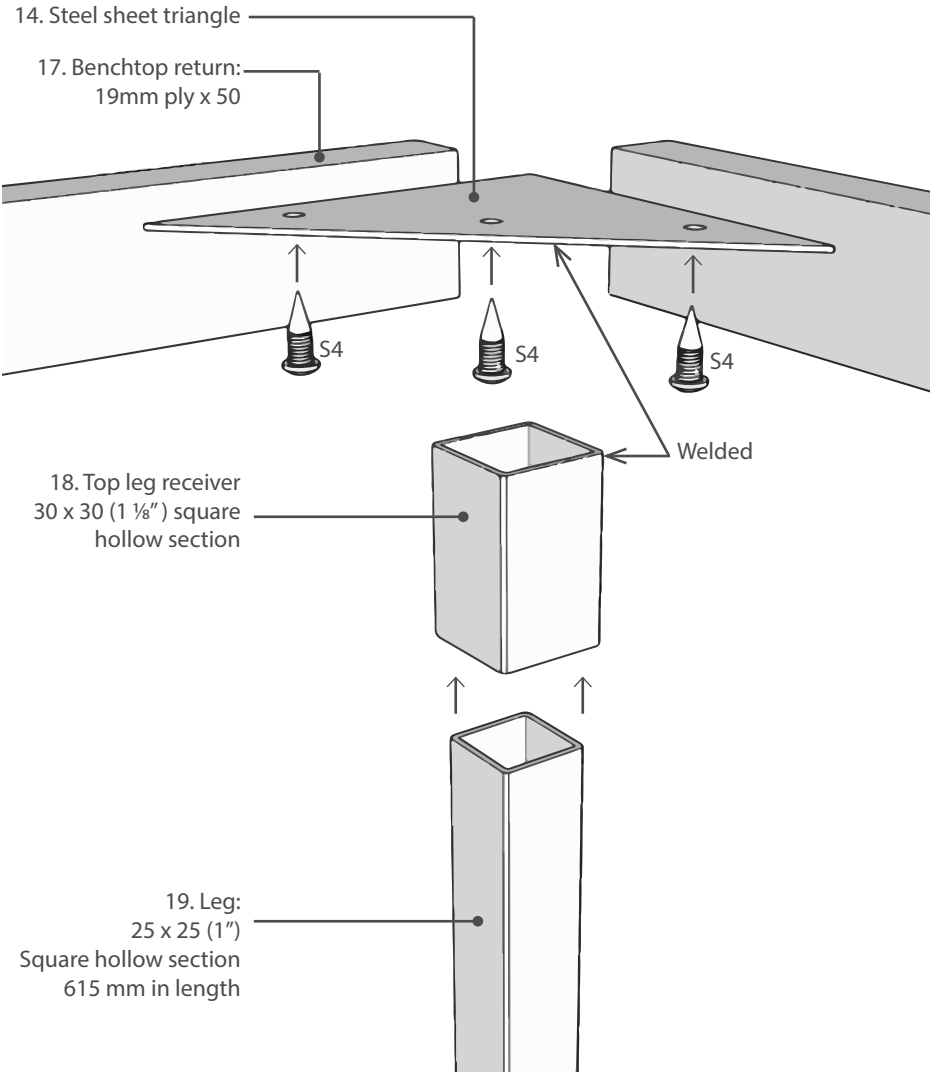
**BOTTOM LEG
RECEIVER
(Assembled)**



FOOT

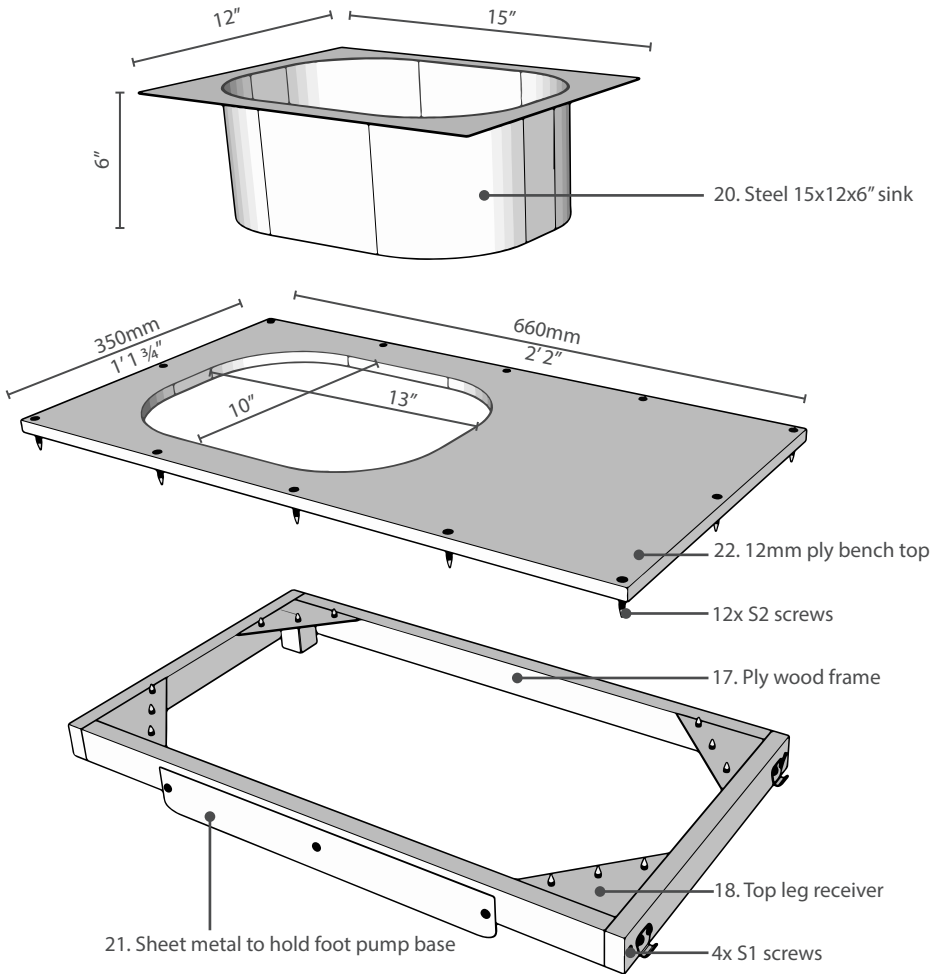
ID	Name	Description	Metric	Imperial	Qty
8	Tabs	3mm (1/8") thick steel tab welded to bottom leg receivers and screwed to box sides	25 x 25mm	1" x 1"	8
9	Wing bolt				4
10	Chain	Steel chain to secure wing bolt			4
11	Bottom leg receiver	Steel square hollow section welded to triangles	30 x 30 150mm length	1 1/8" x 1 1/8" 6" in length	4
12	Leg prop	Steel square hollow section inserted into leg receiver. Used to lengthen leg	25 x 25 90mm in length	1" x 1" 3 1/2" in length	4
13	M12 Long Nut	Used to support adjustable feet. Welded to triangles	M12	1/2"	4
14	Triangle	1.2mm (1/16") thick steel sheet triangle	100 x 100mm	4" x 4"	8
15	Foot Stud	Threaded rod	M12 100mm length	1/2" 4" in length	4
16	Foot plate	Steel square washer	50 x 50mm	2 x 2"	4

TOP LEG RECEIVERS



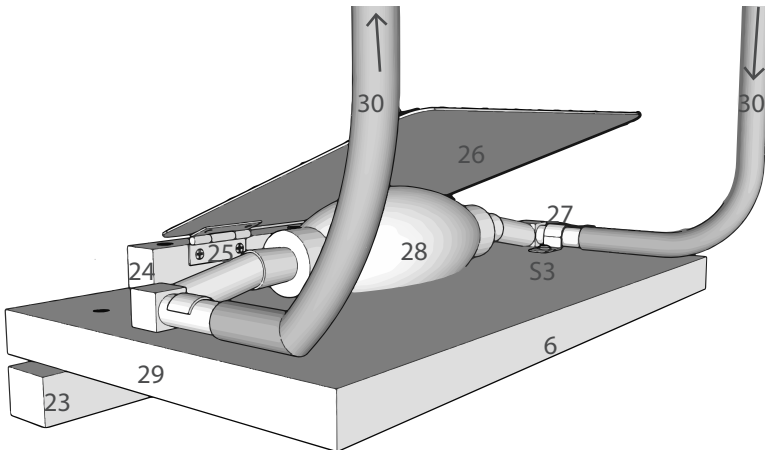
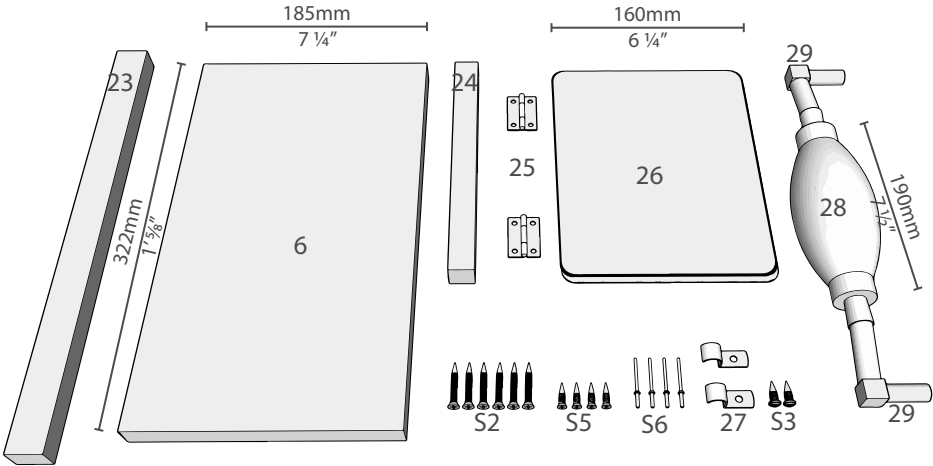
ID	Name	Description	Metric	Imperial	Qty
14	Triangle	1.2mm (1/16") thick steel sheet triangle	100 x 100mm	4 x 4"	8
17	Benchtop return	19mm ply wood frame	622 x 50mm 350 x 50mm	2' 1/2" x 2" 1' 3/8" x 2"	1
18	Top leg receiver	Steel square hollow section welded to triangles	30 x 30mm 150mm length	1 1/8" x 1 1/8" 6" in length	4
19	Leg	Steel square hollow section. 615mm in length	25 x 25mm 615 mm in length	1 x 1" 2' 1/4" in length	4

BOX LID/BENCH TOP

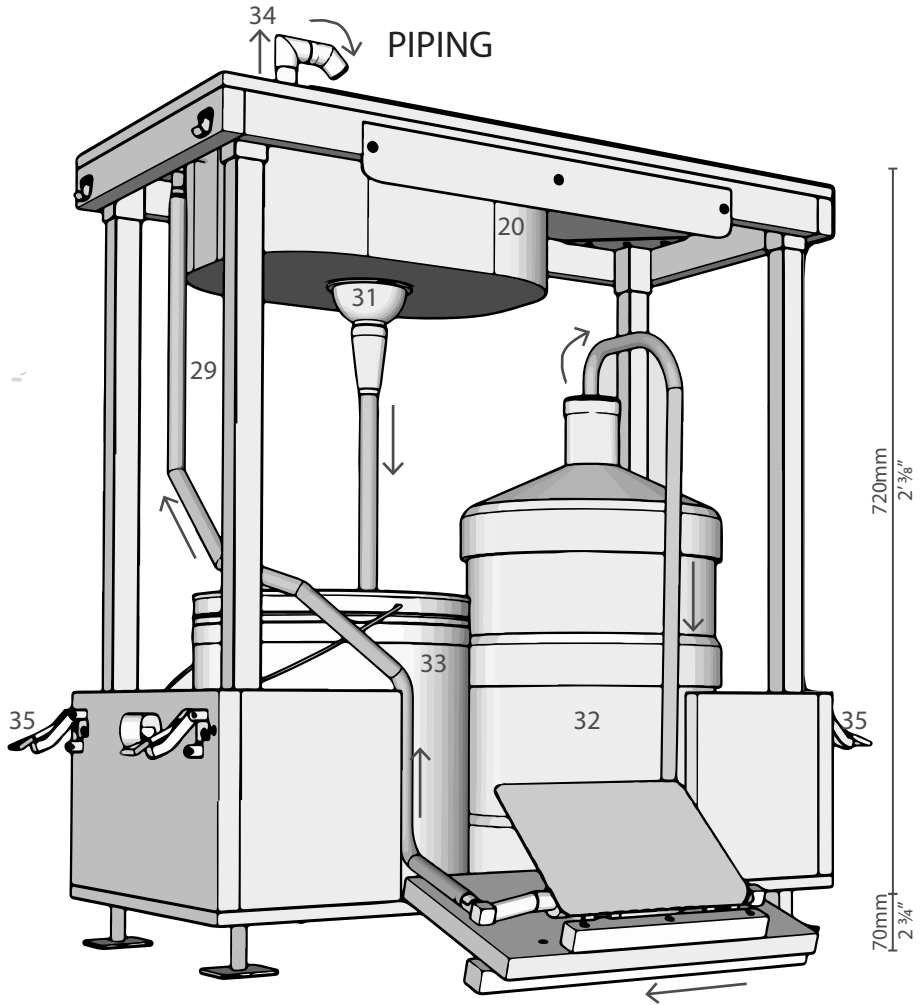


ID	Name	Description	Metric	Imperial
17	Benchtop return	19mm plywood frame	622 x 50mm 350 x 50mm	2' 1/2" x 2" 1' 3/4" x 1"
18	Top leg receiver	Square hollow section welded to triangles	30 x 30mm	1 1/8" x 1 1/8" 6" in length
20	Sink	Steel sink		15 x 12" external 13 x 10" inner 6" deep
21	Steel sheet	Steel sheet to secure foot pump base when disassembled	400mm x 50mm	1' 3 3/4" x 2"
22	Box lid/bench top	19mm ply wood with hole cut out to fit 13" x 10" sink	660 x 350mm	2' 2" x 1' 3/4"

FOOT PUMP

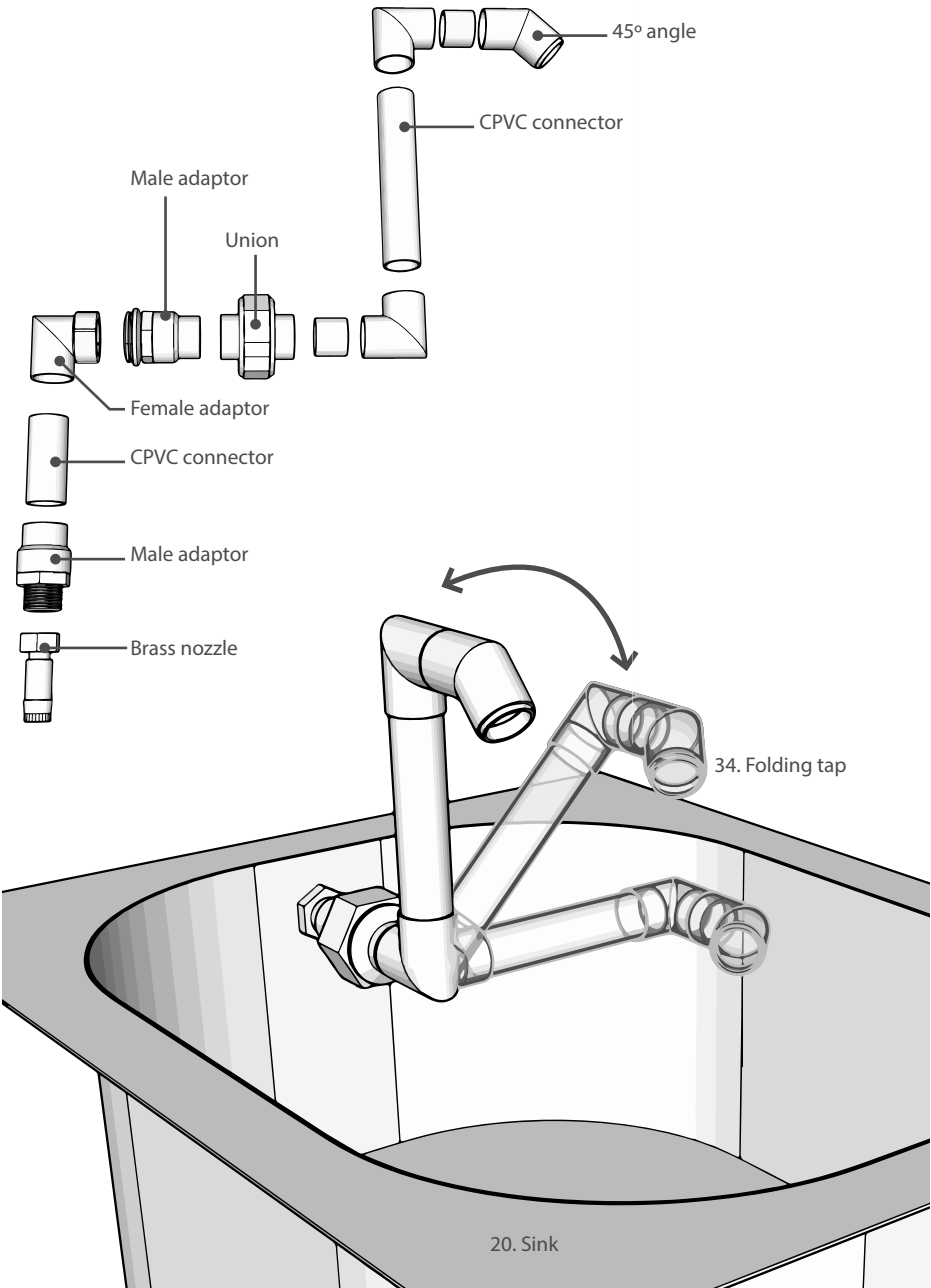


ID	Name	Description	Metric	Imperial	Qty
6	Side E/Pump Base	19mm ply wood	322 x 185mm	1' 5/8" x 7 1/4"	1
23	Pump base support	25mm timber piece to act as footing when base folds open	25 x 350mm	1" x 13 3/4"	1
24	Pedal support	19mm ply	19 x 200mm	3/4" x 7 7/8"	1
25	Pump hinges				2
26	Foot pedal	12mm ply wood	200 x 160	7 7/8" x 6 1/4"	1
27	Saddle				2
28	Pump	Fuel primer bulb	190mm with 10mm hose	7 1/2" with 3/8" hose	1
29	Elbows	To fit primer bulb			2
30	Pipe	Clear LPG gas pipe cut in two pieces	10mm x 2m	3/8" x 6'	1



ID	Name	Description	Metric	Imperial	Qty
20	Sink	Steel square sink		12 x 12" external 10 x 10" inner 4 1/2" deep	1
30	Pipe	Clear LPG gas pipe cut in two pieces	10mm x 2m	3/8" x 6'	1
31	Waste fitting	Hard plastic waste fitting			1
32	20L water container	Typical 20L water container with hole in lid, for clean water			1
33	Bucket	Maximum 20L bucket with handle, for waste water			1
34	Tap	Folding copper pipe tap attached to side of sink			
35	Lock	Over centre locks			4

TAP



LOCK

