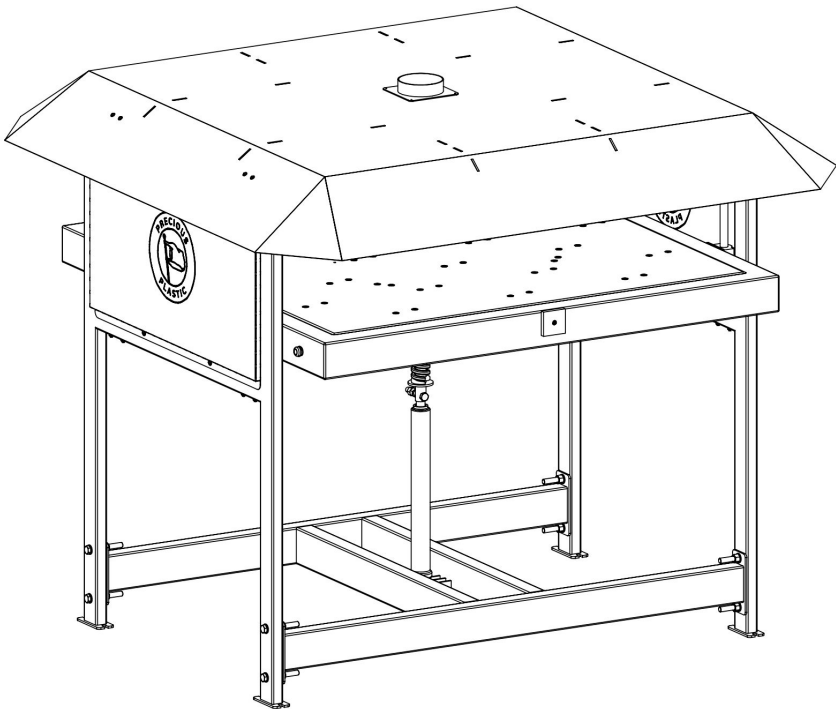




SHEETPRESS



Machine Manual

Contents

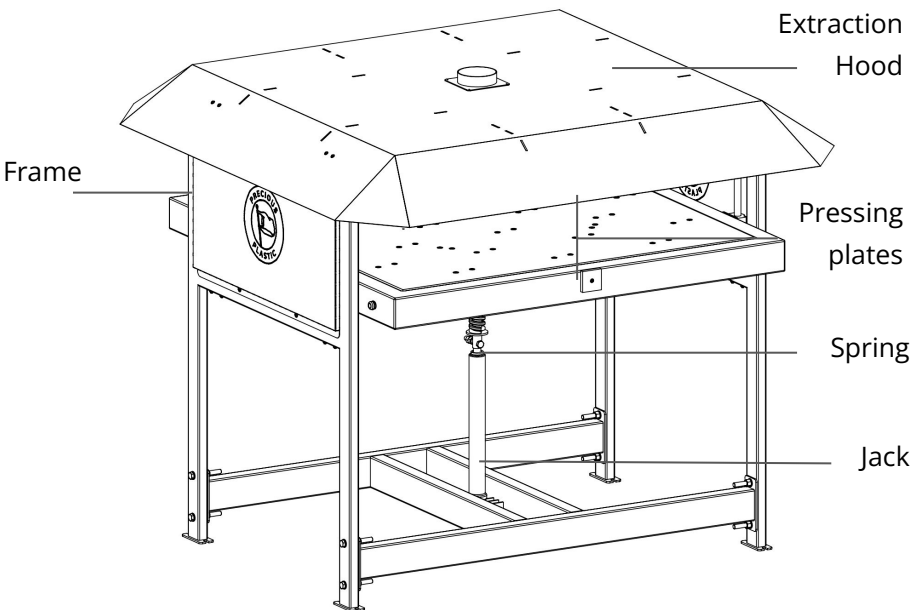
1.0 Introduction	1.1 The Sheetpress	4
	1.2 Components	4
	1.3 Accessories	5
	1.4 Specifications	6
2.0 Operation & Maintenance	2.1 How the Sheetpress works	7
	2.2 Operating the machine	8
	2.3 Maintenance	14
	2.4 Creating with sheets	16
3.0 Safety	3.1 - 3.10 Safety Instructions	20
4.0 Assembly, Setup, Decommissioning	4.1 Unpacking and identification	27
	4.2 Assembly - Sheetpress	28
	4.3 Assembly - Cooling Press	30
	4.4 Assembly - Preparation Table	32
	4.5 Unpacking, assembly, setup	34
	4.6 Decommissioning instructions	35
5.0 More	5.1 Online resources	36
	5.2 Community power	38
	5.3 Be part of it	39
	5.4 Feedback & Support	40
	5.5 Take it to the next level	42
6.0 Technical Documents	6.1 List of recommended spares	43
	6.2 Electrical control box	44

1.0 Introduction

1.1 The Sheetpress

The Sheetpress presses plastic into recycled sheets. This machine can make multiple sheets per day, recycling up to 50kg of plastic per sheet.

1.2 Components

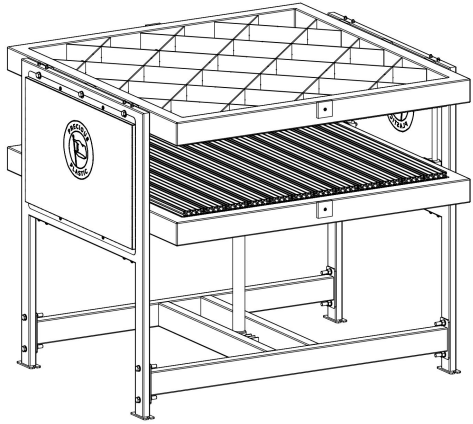


1.3 Accessories

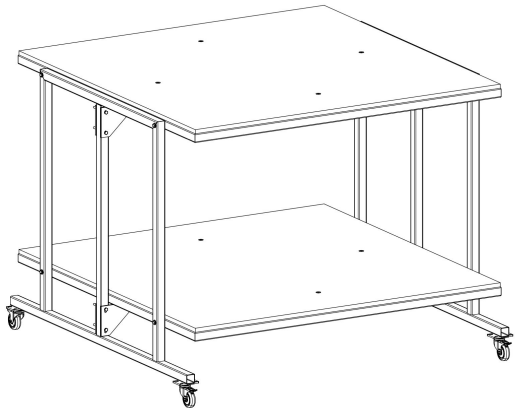
The sheetpress can also be coupled with the *cooling press* and *preparation table* to form the *sheetpress system*. The sheetpress system allows for more efficient production as heating and cooling can be done simultaneously without any down time.

Cooling Press

Available with a standard cooling plate or aluminium extrusion plates (shown here)



Preparation Table



1.4 Specifications

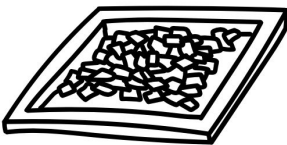
Weight	800 kg
Dimensions (l x w x h)	1670×1670×1800mm
Voltage	400 V, 3 phase
Power consumption	19.6k W
Required amperage	32 A
Pressure	6.5 kPa
Input	Thermoplastics
Input distance between plates	300mm (max)
Output size	1400×1400 mm
Output thickness	1-50 mm
Output	30 kg/hour
Maximum temperature	280 °C
Temperature regulation	Yes
Heater type	Cartridge
Number of operators	1-2

2.0 Operation & Maintenance

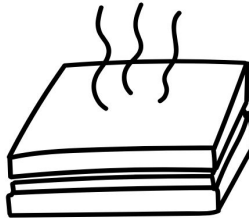
2.1 How the Sheetpress works

This machine creates sheets up to 1×1 meter with a range of thicknesses between 1-50mm. When making a sheet mould there are many different configurations of size, thickness and surface finish.

Do your research, read through different How-To's and check out the products on the Bazar before investing in mould that will fit your needs best.



MOULD



HEAT AND PRESSURE



FINAL SHEET

2.2 Operating the machine

Run Standalone Sheetpress

You have to wait for the Sheetpress to heat up and cool down for each sheet you make, which means you can produce one or two sheets per day. For some people (e.g. craftsmen and artisans) this is acceptable but for many others a faster rate of production is desirable.

Startup

1. Plug in the Sheetpress, check the emergency stop is released and switch on the main power switch.
2. Check the required temperature to melt your type of plastic and set the PID controller to this temperature.
3. Close the pressing plates using the bottle jack and wait for them to heat up.
4. Whilst waiting for the heating plates to warm up weigh the plastic. See the Datasheet for weights.

Production

5. When the Sheetpress is at the required temperature. Open the pressing plates of the Sheetpress by releasing pressure from the bottle jack.
6. Place the bottom sheet of the mould on the bottom pressing plate and apply a layer of silicone oil. Make sure to remove any remnants of the previous sheet.
7. Load the plastic into the mould.

8. Spread the plastic evenly across the area inside the mould frame with slightly less around a 100mm border offset on the inside of the edges.
9. Oil the top sheet of the mould and place the oiled side face down on the bottom two sections of the mould.
10. Close the pressing plates using the bottle jack until the spring is fully compressed.
11. Whilst waiting for the plastic to melt. 2 mins before the recommended melting time close the pressing plates using the bottle jack until the jack starts to give strong resistance. See the Datasheet (Appendix A) for melting temperatures and times.
12. When the mould has been in the sheetpress for required melting time. Switch off the Sheetpress.
13. Alternatively you can take out the mould and either weigh it down or clamp it to allow the sheet to cool externally.

Run the full Sheetpress system

To improve ease of use and efficiency we designed three tools to turn the Sheetpress in to a full-on production system. Adding a cooling press, prep table and sliding tool allows you to prepare, heat and cool sheets simultaneously. You are also able to transport them easily and safely between each three of these stages. This dramatically increases the rate of production.

Startup

1. Plug in the Sheetpress, check the emergency stop is released and switch on the main power switch.
2. Check the required temperature to melt your type of plastic and set the PID controller to this temperature.
3. Close the pressing plates using the bottle jack and wait for them to heat up.
4. Whilst waiting for the heating plates to warm up. Place the bottom sheet of the mould on the prep table and apply a layer of silicone oil. Make sure to remove any remnants of the previous sheet.

Production

5. Place the mould frame in the centre of the sheet and apply a layer of silicone oil to the top of the frame.
6. Weigh the plastic and load it into the mould.

7. Spread the plastic evenly across the area inside the mould frame with slightly less around a 100mm border offset on the inside of the edges.
8. Oil the top sheet of the mould and place the oiled side face down on the bottom two sections of the mould.
9. When the Sheetpress is at the required temperature. Open the pressing plates of the Sheetpress by releasing pressure from the bottle jack.
10. Position the prep table next to the open side of the Sheetpress.
11. Use the sliding tool, push the mould from the prep table to the Sheetpress.
12. Close the pressing plates using the bottle jack until the spring is fully compressed.
13. Whilst waiting for the plastic to melt. Prepare the next mould and sheet on the prep table. (Steps 4-8).
14. 2 mins before the recommended melting time. See the Datasheet (Appendix A) for melting temperatures and times. Close the pressing plates using the bottle jack until the jack starts to give strong resistance.
15. When the mould has been in the sheetpres for required melting time. Open the pressing plates of the Cooling Press by releasing pressure from the bottle jack.

16. Open the pressing plates of the Sheetpress by releasing pressure from the bottle jack.
17. Use the sliding tool, push the mould from the Sheetpress to the Cooling Press.
18. Close the pressing plates of the Cooling Press using the bottle jack.
19. Load and press the next sheet in to the Sheetpress (Steps 10-13). This time stack it on top of the previous sheet.
20. Repeat steps 13-20 until your workcycle is complete. Finished? Switch off and close the Sheetpress.
21. Clean and apply a layer of silicone oil to the mould sheets to protect them from moisture between use.

Tips & Tricks while using

1. Apply silicone oil to moulds with a paint roller to speed up production.
2. Install air powered hydraulic jacks to sheetpress and cooling press to speed up production.
3. If you have wet plastic, allow it to sit unpressed on the bottom plate for a while and wait for the water to evaporate.
4. You can use the heat of the sheetpress to process ready made sheets - for example for bending.
(Check out our How-to's for more info on that.)

5. For sheet moulds, 3mm heat treated aluminium sheets work very well, they are light, strong and easy to de-mould.
6. We recommend using T-beams to make mould frames, they are strong and cut the edge off the sheet nicely.

Temperatures

Below you can find a diagram with the best settings for this machine based on our experience. This is only a reference where to start - the required temperatures and times can vary depending on location, air temperature or plastic source.

We recommend to make one your own sheets based on your own experiences.

Sheet thickness	HDPE 220°	PP 230°	PS 240°
6MM	6.5 KG 40 Min	6.5 KG 40 Min	6.5 KG 40 Min
8MM	8.5 KG 45 Min	8.5 KG 45 Min	8.5 KG 45 Min
10MM	11 KG 50 Min	11 KG 50 Min	11 KG 50 Min
12MM	12 KG 55 Min	12 KG 55 Min	12 KG 55 Min
20MM	22 KG 60 Min	22 KG 60 Min	22 KG 60 Min

2.3 Maintenance

Weekly

- Clean the heating and cooling plates
- Bleed the **jacks** and inspect their oil levels. Bleeding can be done by setting the jack valve to open and pumping the lever by hand twenty to thirty times.
- If your mould sheets are bent and are in need of straightening, you can try straightening them in your sheetpress. Set your machine to 250 degrees and press your moulds for 30 minutes. Turn off the machine and allow the moulds to cool while they remain under pressure.

Monthly

- Use a wooden spatula to apply a liberal amount of grease to all the rails, we used engine grease.
- Inspect your mould sheets, if any of them are damaged beyond repair then they may need replacing.
- Check website for hacks/updates. The community are continuously developing hacks, modifications and techniques which get shared on the internet, take a look to see what is there that can help or inspire you!
- Check your emergency stop is still functional. Turn the machine on so that the PID display is on. Press the red emergency stop button - if the PID displays turn off, the emergency stop is functional. If it is not, a licensed electrician must install a replacement before further use.

Yearly

- Deep clean the **heating plates**. Use a trowel to scrape any remnant material from the heating plates. You may need to use a rotary sander to remove tough burnt parts on material but be gentle, use a high grit sandpaper (>220) to preserve the flatness of the sheet.
- Check that the **heating elements** are all in working condition. This can be done by turning the machine on for 30 sec, then turning it off and measuring each element individually with a thermometer gun or a thermometer. If the temperature reading did not increase, that heating element may require replacement.
- Check the **electronics box** and inspect for signs of dust, liquids or burn marks. Also ensure all wires are securely in place. If any repair is required, seek a licenced electrician.

2.4 Creating with sheets

Techniques

There are different ways of processing plastic sheets to create final products. Here we go over two of our most common techniques:

1. Cutting and woodworking techniques

Cutting is the most common process and there are a number of different methods - you can use regular woodworking tools such as a jigsaw or table saw or more advanced methods like CNC milling.

HDPE and PP are easiest to cut and use.

- Having a clean cut is a matter of finding the right tool and blade.
- Air cooling will help if you have access to it.
- Cutting will produce a lot of offcuts, make sure to collect this and reuse.
- Snap fit joints works really well on plastic

Note: If you're using large cuts of plastic make sure to get familiar with the material and how it sags and bends across bigger areas. It can be very flexible and the more you know about it's properties the more you can amplify it's qualities.

2. Bending

This is quite fun! By applying the right temperature for a period of time you can mould and bend a sheet and turn it into a three-dimensional shape.

The most important thing to get right is the temperature - this defines how fast and evenly the heat will spread through the sheet. It will be affected by the type of plastic, the size of the bend and the thickness of the sheet.

- Fast heat will guarantee the heat spreads evenly allowing for a nice and easy bend. If it's too slow, it can burn on the outside before the heat reaches the inner layers, ending up in an uneven surface and cracks/white marks along the bend.
- Thinner sheets up to 6-8mm are easier to bend
Above 6-8mm we recommend using double sided heat to reach the middle fast enough for a clean bend. This technique works well with PS but is harder when working with PP, LDPE or HDPE.
- You can use line benders, there are many DIY options online using Nichrome wire for sheets under 6mm. For above you'll need thick strings and double sided heat is highly recommended. You could also use heated blade benders for HDPE and PP.
- A less efficient option for smaller bends is heating the full piece in an oven and forming it with a two sided mould - it can be fast but restrictive due to the size of the oven.

Plastic input

We have successfully pressed sheets from clean HDPE, LDPE, PP and PS. The press can take any type of flakes (small, medium, large). We recommend using the large flakes produced from the Shredder Pro with the large sieve, since it reduces the amount of shredding.

We have had success in pressing sheets made from non-shredded bottle caps, the melting time just increases slightly with a larger size of input material. Here is a chart to give an overview in different thicknesses, times and temperatures.

Important: If you press dirty plastic, it will result in a low material quality, but also leave burned residue on the mould which is very difficult to remove.

Production time

We recommend pressing only one sheet at a time. It may be possible to press more efficiently by melting multiple at a time but we have not figured out how to cool them evenly yet. If you figure out a way, please share it on our online community!

Sheet size

The aluminum pressing plates are 1500×1500mm but there is often an overflow from the mould so we recommend making moulds of 1220mm so that once they have shrunk from cooling they are a standard 1200×1200mm. Thickness can be between 1 to 50mm, but feel free to explore more!

Playing with colors

This is where there is room to play. You can basically mix any color as long as it is the same type of plastic. A few variables to play with, the size of the shredded plastic. Small, medium or large flakes will have a different effect. Also using transparent plastic in there gives an interesting layer of depth. (Find more examples on the poster in the downloadkit.)

Have a look at the Precious Plastic Academy and the How-to's to learn more about **creating with plastic** community.preciousplastic.com/academy

3.0 Safety

3.1 - General instructions

- The sheetpress system is designed to process thermoplastics only. Processing other materials could introduce additional hazards.
- It is recommended that the source and grade of the plastic material is also known and does not contain any contaminants (for example water or oil) that could introduce additional risk.
- Batches of mixed plastics shall not be used with the sheetpress as they may possess different melting temperatures - melting plastic at the incorrect temperature may increase the risk of VOC emissions.



- Regular maintenance must be conducted at intervals specified in 2.3 to ensure the system is working as intended.
- A monthly check of the electrical emergency stop shall be conducted. Instructions on how to do this can be found in section 2.3.
- If it is found that the emergency stop is no longer functional, a licensed electrician must install a replacement before continued use of the machine.

- The following components have been designed or selected for the safe operation of the machine. As such, they should not be removed or replaced by components which are not identical.
 - Extraction hood
 - Electronics box and its contents
 - Manual bottle jack
 - Spring
- As outlined in section 2.3, the jacks shall be inspected for leaks on a weekly basis. If the oil is low, it can be refilled using hydraulic fluid. If it is observed that there is damage to the jack or seals, it should immediately be repaired or replaced by another 8 ton manual long ram jack.
- The sheetpress system should be used with the intended 1200×1200×3mm aluminium mould sheets. When replacing these moulds, it is possible to use thicknesses from 1mm-4mm however using other materials and sizes may generate undesirable results or introduce additional hazards.
- The sheetpress must not be modified in any way. Doing so may introduce additional hazards.

3.2 - Rescue procedure

- If a person or any of their body parts become trapped between the pressing plates, the operator must immediately discontinue the manual pressing procedure and activate the release valve. The operator should then provide assistance to remove the person if they are unable to do so.

3.3 - Exhaust ventilation system

- During the plastic melting process, hazardous compounds including volatile organic compounds (VOCs) are released.
- A ventilation system with an activated carbon filter or other filter suitable for VOC filtration must be used in conjunction with the sheetpress system at all times. This system shall be fitted to the included extraction hood for the most efficient extraction of fumes.
- It is recommended that an electrician wires the ventilation unit such that it automatically initiates once the power to the sheetpress is initiated.
- Consult the manufacturer guidelines of the filtration unit for details about maintenance and filter replacement.
- A respirator suitable for VOCs should always be worn when dealing with high volumes of plastic. Consult the manufacturer guidelines for instructions on replacement intervals of filters.
- It should be noted that melting thermoplastics above their unique melting temperature is proven to emit a higher level of VOCs and thus should be avoided. It is the user's responsibility to be informed on these melting temperatures and avoid heating plastics above these values.
- It should be noted that processing PS emits a higher level of VOCs which are hazardous to health and additional safety measures such as a VOC detector and additional space filtration is recommended when processing this materials
- Processing PET, PVC and other plastics not mentioned in section 2.2 can be highly hazardous and not advised with this system.

Have a look at the chapter about safety in the Academy to read more about **fumes and safety gear**.
community.preciousplastic.com/academy/plastic/safety

3.4 Movements of moulds

- Movements of moulds, particularly when moving hot moulds from the sheetpress to the cooling press, must only be made with the included pushing tool.
- Direct contact and handling of the moulds when hot is not advised.
- While a user is in the process of pressing the plates together, others in the space shall be advised to maintain a 3m distance from the machine in order to prevent crushing risk or material ejecting out from between the plates.

3.5 Personal protective equipment

- Heat proof gloves such as MIG welding gloves should be used at all times while using the sheetpress system. These gloves should extend to provide protection to the forearms as well.
- A work suit or coverall that covers arms and legs must be worn while using the sheetpress system.
- Safety glasses or a face shield must be worn at all times in the vicinity of the sheetpress system to protect from spontaneous ejection of hot substances from the mould area or the unlikely failure of moving parts.

3.6 Moulds

- Moulds protruding outside the heating plates must not be used

3.7 Ancillary equipment

- The sheetpress system is not designed to be used in conjunction with any other equipment than what is provided.
- Ancillary equipment shall not be mounted to the existing frame.
- Any additional equipment used may introduce additional risk which is not the responsibility of Precious Plastic.

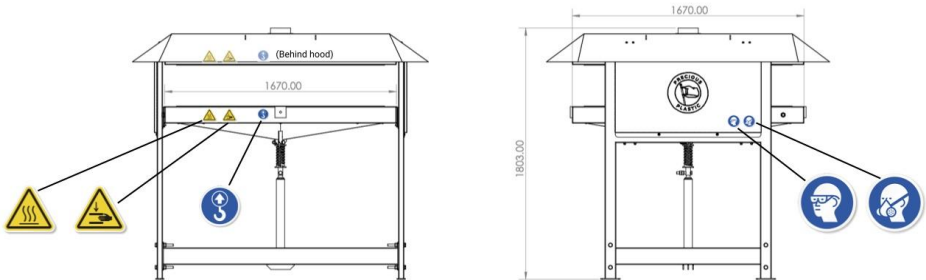
3.8 Work-space hazards

- The sheetpress and cooling press must be fastened securely to the ground using all of the mounting holes with M12 hardware (or ½" hardware where relevant).
- It is recommended that an additional risk assessment specific to your space is completed to identify and control risks posed by the sheetpress in your specific context. Note that tripping and slipping hazards can have more severe consequences when dealing with hot equipment.
- It should be noted that silicone oil can become very slippery if it is spilled or ends up on the ground as a result of the production process. As such, regular cleaning of the floor is recommended to control slipping hazards.

3.9 Information for emergency situations

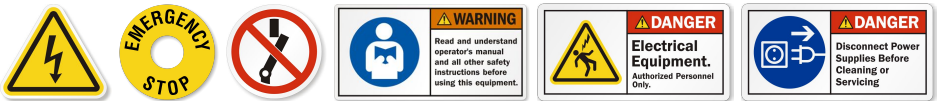
- The sheetpress can reach temperatures of up to 300°C and so as such, poses a serious risk of fire if there are no steps taken to reduce this risk.
- It is recommended that an individual risk assessment is undertaken for each specific workspace. As part of this assessment, a fire extinguisher shall be located near the machine.
- It is recommended that all operators shall regularly undergo an induction on the emergency procedure associated with their specific space.
- It is advised that only PP and HDPE are used without further installation of extraction to the space. If, however, a hazardous plastic is accidentally used with the machine, an evacuation procedure shall be initiated. This consists of disconnecting power to the machine and all persons within the space being removed until the fumes have cleared.

3.10 Safety Labels



Safety stickers on Sheetpress frame - from left to right:

- Burn Hazard: Indicates a hazardous hot surface
- Hand Crush: Indicates an area of hazard due to crushing
- Lifting Point: Indicates lifting points for handling
- Wear Eye Protection: Indicates that eye protection is required when using this particular machine
- Wear Respirator: Indicated that a respirator is required when using this particular machine



Safety stickers on electronics control box - from left to right:

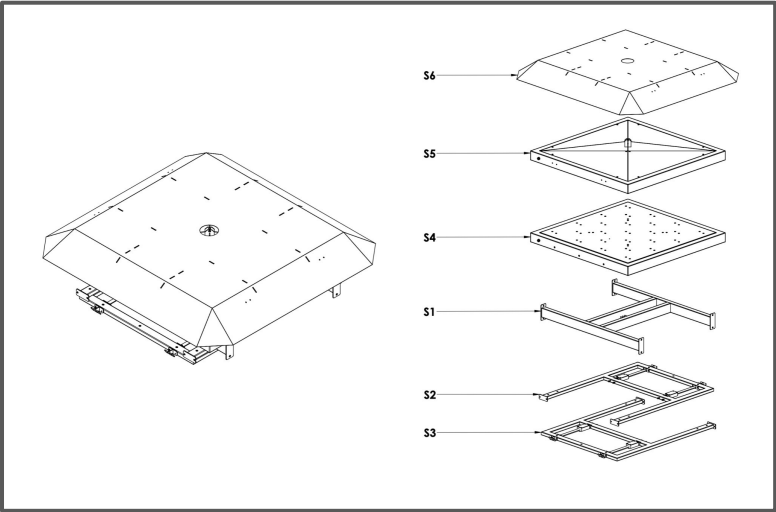
- Electrocution: Indicates hazards due to live parts
- Emergency stop: Signifies the emergency stop button for cutting power to machine in case of emergency
- Do not switch: Do not disconnect during operation
- Read manual: Read manual before using equipment
- Electrical equipment: Authorised personnel only
- Disconnect power: Disconnect power for service

4.0 Assembly, Setup, Decommissioning

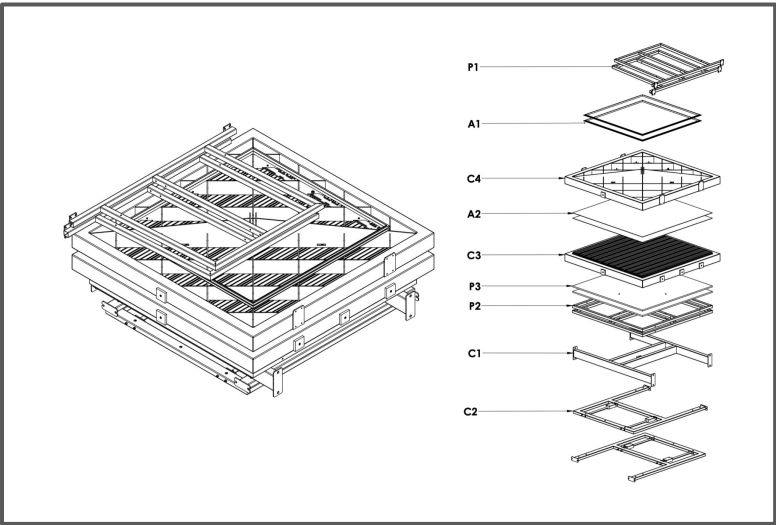
4.1 Unpacking and Identification

The diagrams illustrate the packing arrangement of the sheetpress system. If you ordered the stand-alone machine, you will only have the first box. If you have the system, you will have both boxes.

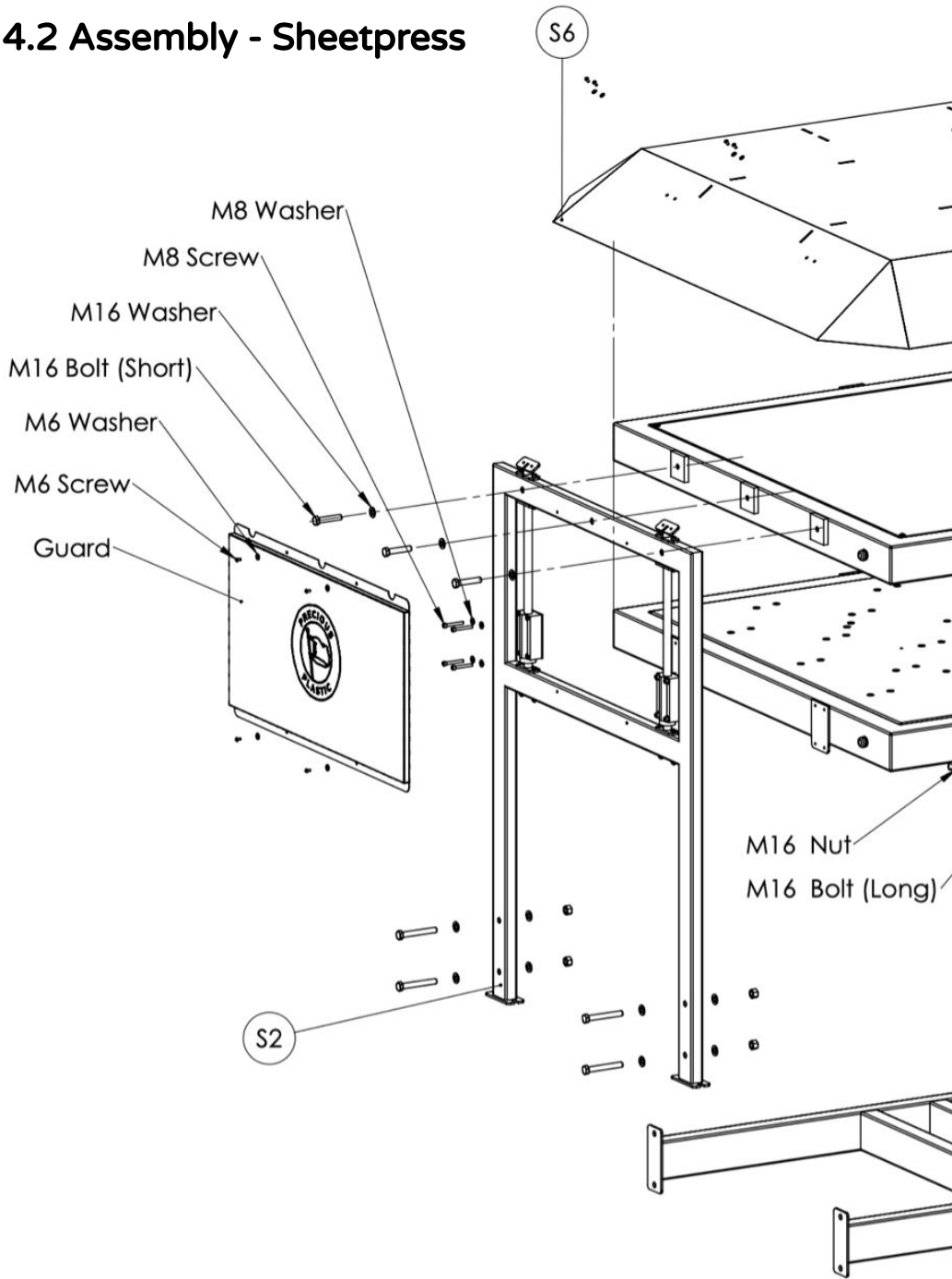
Box A

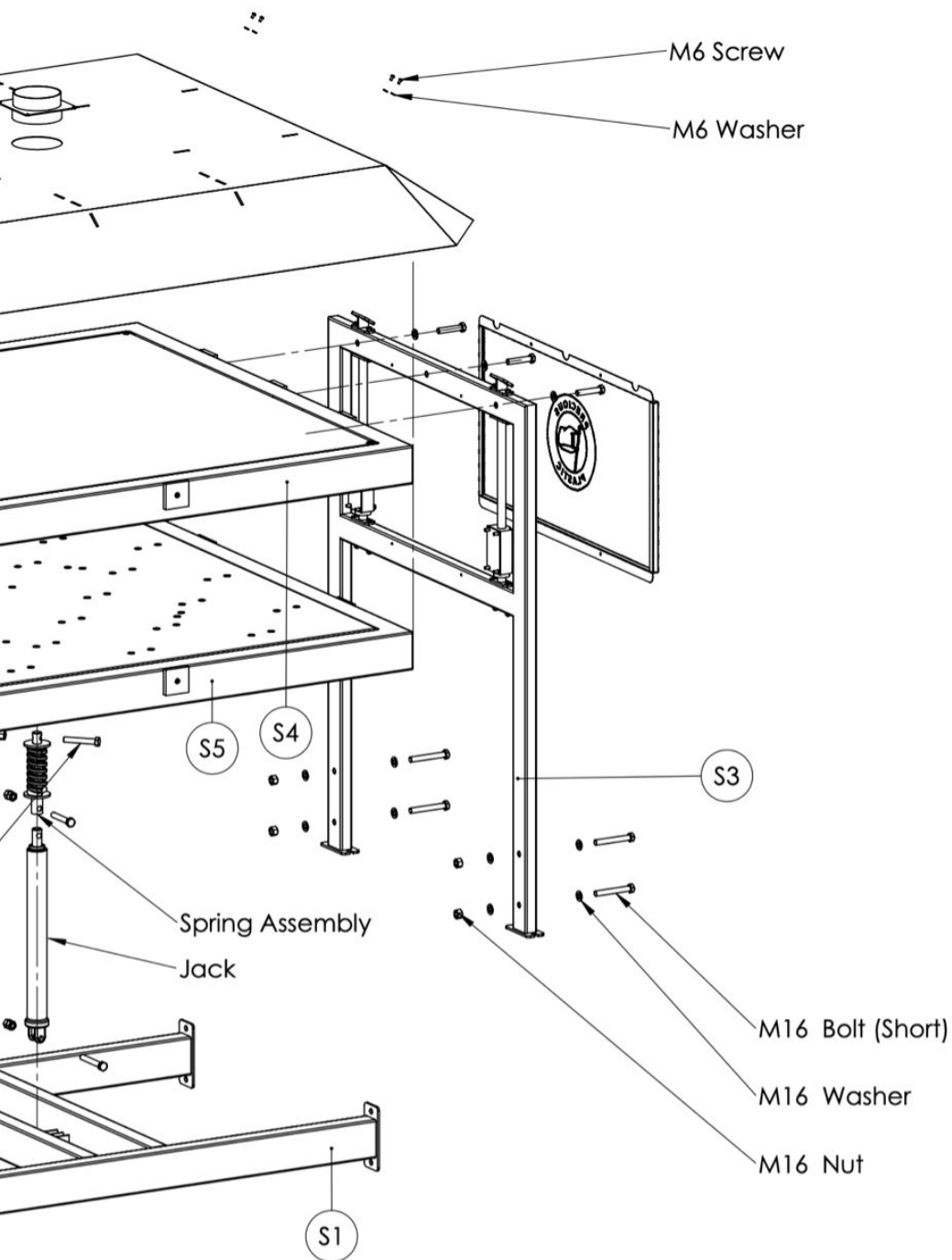


Box B

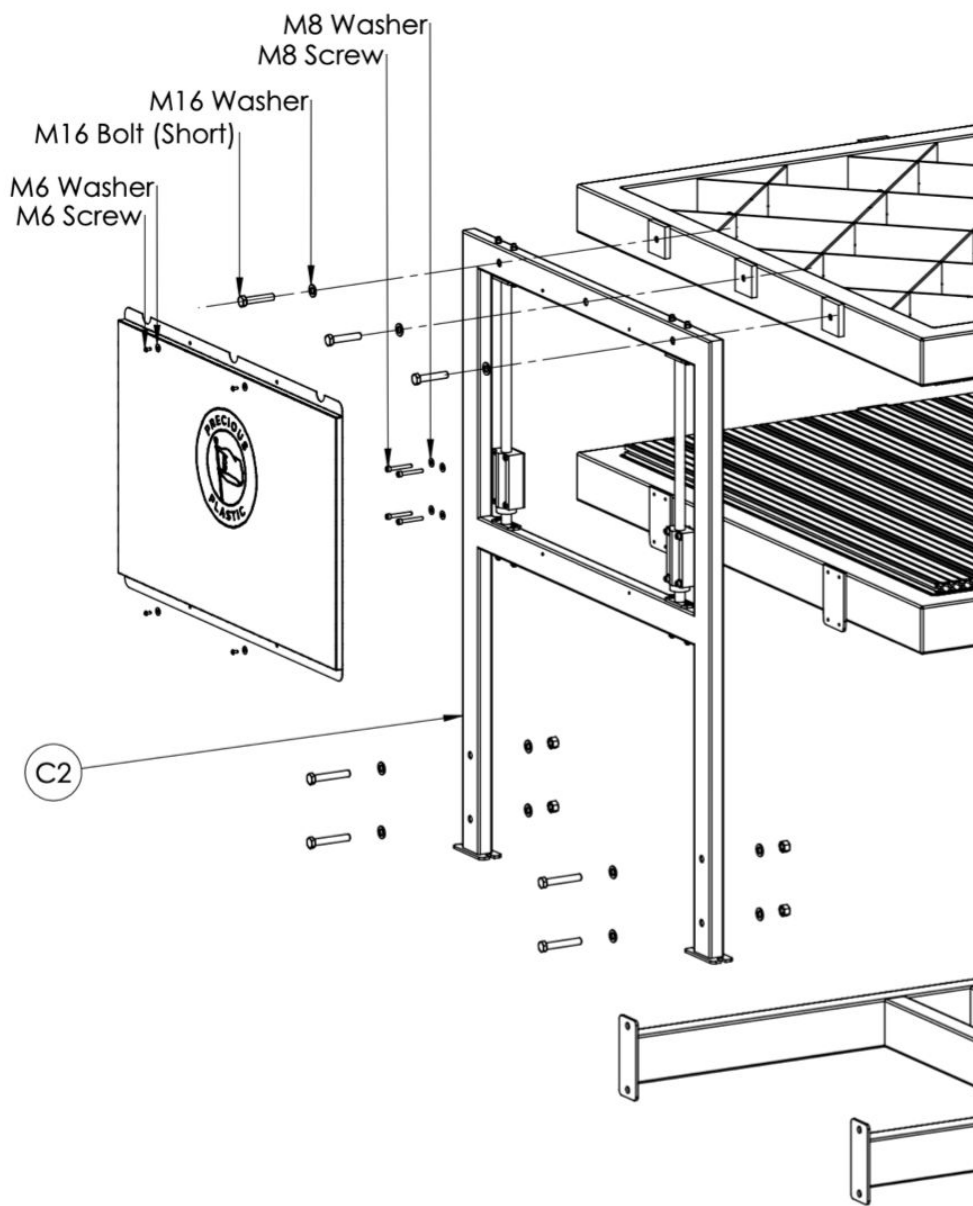


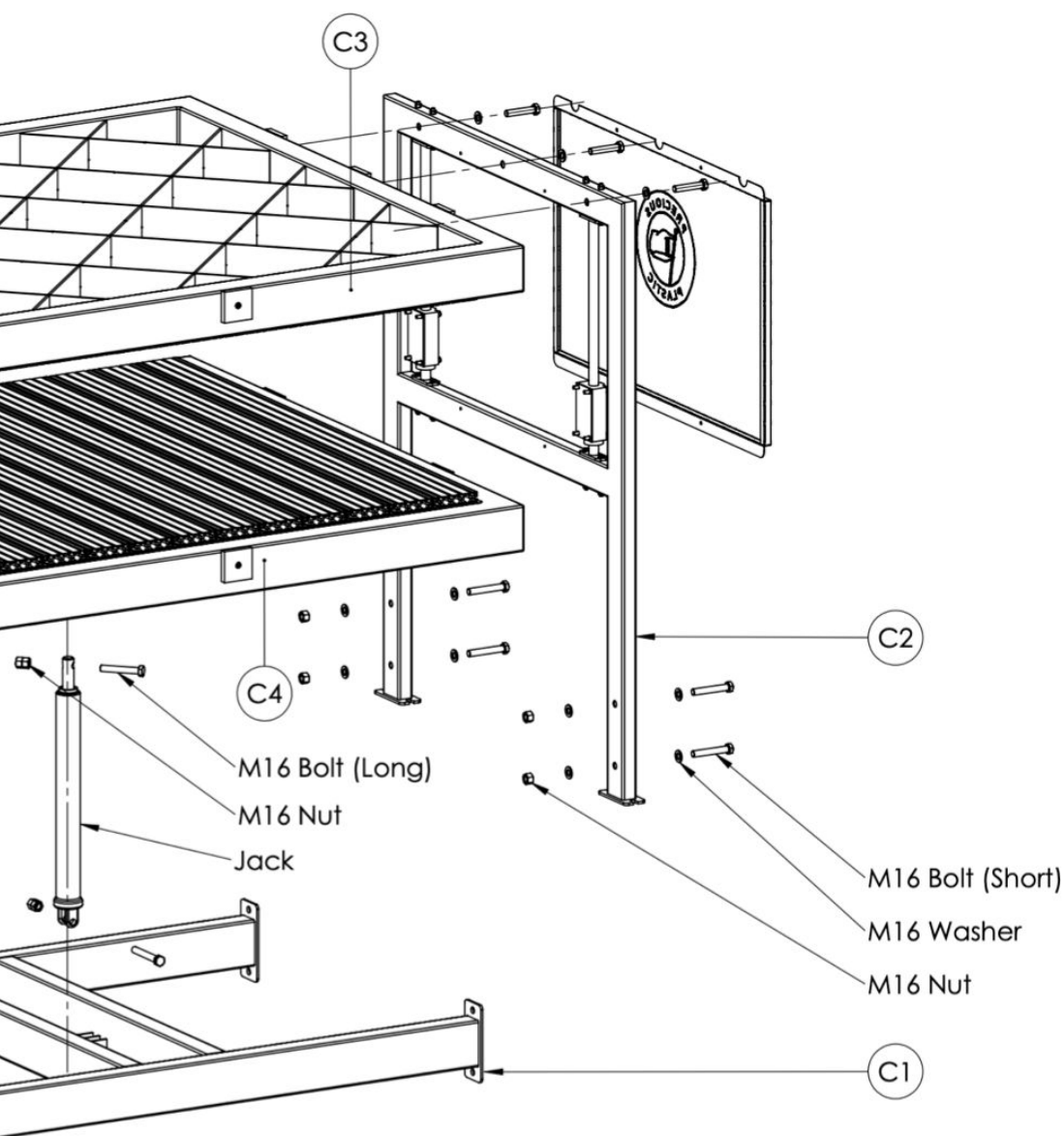
4.2 Assembly - Sheetpress



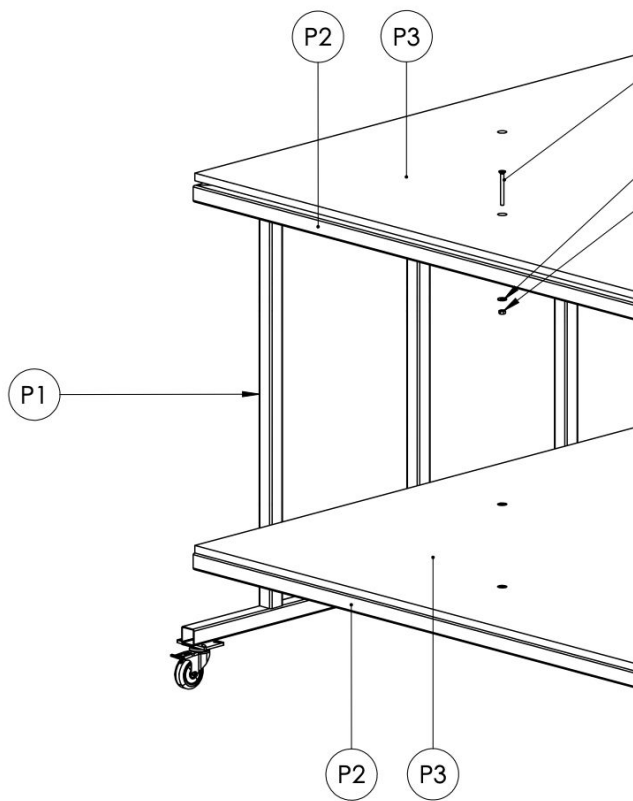


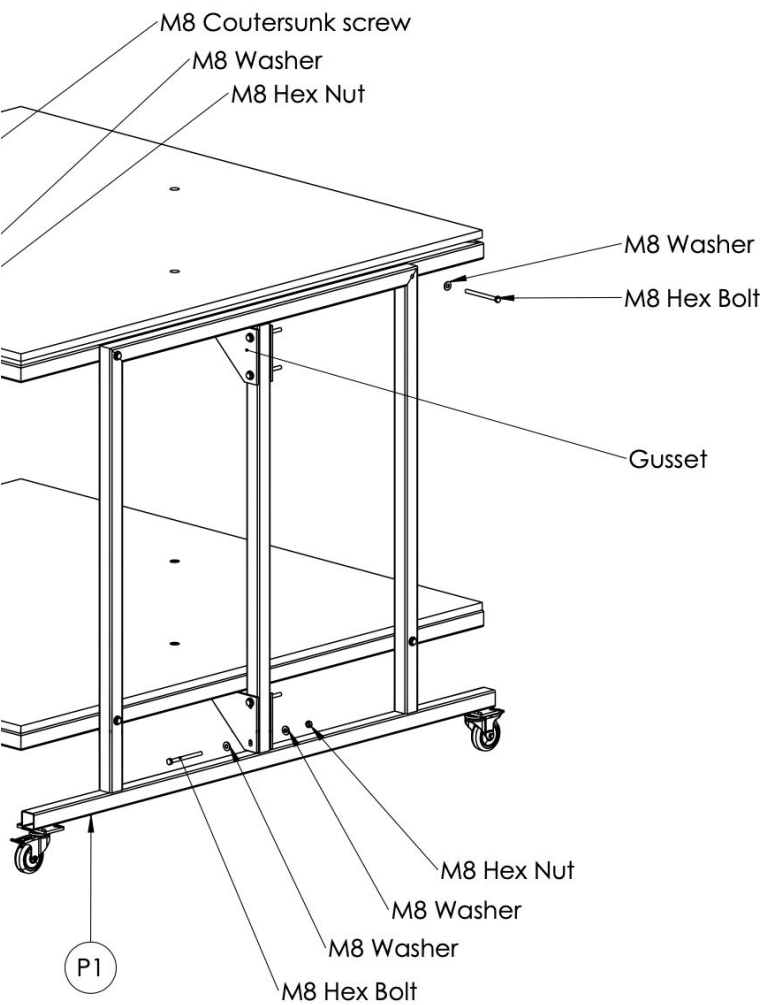
4.3 Assembly - Cooling Press





4.4 Assembly - Preparation Table





4.5 Unpacking, Assembly and Setup Safety

- Before installation, store the machine indoors away from moisture, rain and dust.
- Set up the machine in a space where there is at least 2m clearance around all sides of the machine.
- Before any unpacking or assembly occurs, it is recommended that all people involved wear the appropriate personal protective equipment. For this procedure, appropriate PPE includes: A hard hat, eye and hand protection, steel capped boots and high visibility vests.
- It is recommended that one person, commonly referred to as a 'spotter', watches the procedure from a distance (usually a 3m radius) and provides instructions and risk warnings based on what they observe.
- A pre-operation inspection is also recommended in order to plan the procedure and identify any risks specific to the environment or particular equipment.
- A visual inspection of the ropes/straps, eye bolts/anchor points and lifting equipment is also recommended to identify any unexpected damage due to transportation.
- Only lift the pressing plates with mechanical assistance via a hoist or similar lifting device.
- Safety instructions of your chosen lifting device should be referred to for more specific safety instructions.
- Never work under suspended loads or lift loads over people.
- In order to lift and maneuver the pressing plates, it is recommended that the included anchor points are used.
- When lifting other parts by hand, adhere to good practice lifting techniques to reduce the risk of strain and injury
- The sheetpress shall only be connected to power with the included power cable. Any modifications must be checked and approved by Precious Plastic. A 32A breaker should also be installed in the main power box upon installation.

4.6 Decommissioning Instructions

- Disconnect the sheetpress from the power supply
- Before any dismantling occurs, it is recommended that all people involved wear the appropriate personal protective equipment. For this procedure, appropriate PPE includes: A hard hat, eye and hand protection, steel capped boots and high visibility vests.
- Use appropriate equipment for handling the dismantled parts
 - a crane, hoist or similar lifting device is required.
- Ensure lifting points are used to support pressing plates when removing the side frames.
- Dismantle the product in accordance with all the precautions imposed by the laws in force in the country of use. If required before demolishing request an inspection by the relevant authorities and relative report.
- Dismantle the system down to the individual parts shown in 4.2-4.4.
- Proceed with disassembly of the individual components/parts and group them together according to the materials they are made of: (steel, stainless steel, aluminum, electrical parts, electronic parts).
- Clean all the disassembled parts.
- Dispose off / scrap the separated, segregated individual parts /materials in compliance with the laws in force in the country of use.

5.0 More

5.1 Online resources

Getting started can be overwhelming. Plastic recycling is a big topic and there is a lot to learn. We do our best to create online tools to help you find more information, resources and people to connect with:

Website

Our website explains everything around the project, from the history and mission, to machines, the community around it and which options are there to start recycling.

www.preciousplastic.com

Academy

The Academy is where you'll find video tutorials, tips, drawings and much more on topics like plastic, machines, product design, business and so on.

community.preciousplastic.com/academy

Map

There is a custom map to connect the Precious Plastic Universe. Find recycling spaces near you to push local plastic recycling in your area.

community.preciousplastic.com/map

Events

Find and share Precious Plastic events and meet people in real life. Meetups, presentations, conferences and more to start collaborating locally.

community.preciousplastic.com/events

How-to's

How-to's are a tool for people to share step-by-step guides on how they tackle plastic waste. Learn how people around the world hack machines, make products, collect plastic and more.

community.preciousplastic.com/how-to

Bazar

The Bazar is a marketplace to buy and sell Precious Plastic machines, parts and products. Creating a new recycling economy, so entrepreneurs can recycle full time!

bazar.preciousplastic.com

Discord

As a community we make use of Discord to chat, learn from each other and answer questions. Besides the practical stuff it's also a great place to meet like-minded people and get inspired by other projects.

discord.com/invite/rnx7m4t

5.2 Community power

Precious Plastic comes with a worldwide community of collectors, machine builders, recyclers, designers, activists and more people sharing the mission to tackle plastic pollution.

It's fun to be part of a global community of like minded people, you can always find new interesting and wonderful human beings to connect to and exchange :) But it can also just be really really useful - if everyone takes part in it!

Get inspired

Many people working on the same topics means many different ideas and solutions. Following, connecting and exchanging with the community brings all the creative minds together and can result in something one person alone could have never done alone.

Learn and improve together

Working with plastic opens a big world of possibilities but also challenges and uncertainties. It's a lot about trying, failing, learning from failures and making it better the next time. By sharing those experiences (successes as well as failures), we can save each other a lot of time on the way and achieve better results much faster.

Make a positive impact

Finally, it creates a movement, a global army of people fighting plastic waste, helping each other and (instead of waiting for the system to change) making a positive change locally, and getting more people involved on the way.

5.3 Be part of it

There are several ways to participate in the community. Here are the main things you should keep in mind and why:

Put your Pin on the Map

Create your profile, describe your setup and activities and include links to your website, social media, Bazar account - whatever you want other people to find about you.

Why? This exposes you to the community, and generally people who want to connect and collaborate for a recycling project. It also helps us to get an overview of the active Precious Plastic community and potentially get you involved in our projects!

community.preciousplastic.com/map

Buy and sell on the Bazar

If you're looking for materials, machines or product around plastic recycling, or want to sell your own, do it on the Precious Plastic Bazar.

Why? It can be a lot easier for you to find what you need and enables other people to find you as a seller in the plastic recycling area. This way we can also highlight and feature you on our platforms - AND with every purchase or sale you directly support individuals in the community, and Precious Plastic to keep improving and running the platform.

bazar.preciousplastic.com/

Make How-to's

We understand that documenting is the boring part. However, this is also one of the most important parts of the project. Discord is a great place to share small highlights, but if you develop a product, machine hack or technique, the best way to document that is with a How-to.

Why? By sharing even just a small trick you learned, you can save others a lot of time and hassle and maybe even give them a good idea for another improvement or something completely else. Using all the different brains and backgrounds worldwide, we can develop better solutions much quicker. It's a global problem, which needs a global effort to be solved!

Tag us! #preciousplastic

When you share your process and creations with the world, please use #preciousplastic, or even better tag @realpreciousplastic in your text. Why?

Crediting: We give everything we develop away for free and enable thousands in the world to make some cash with recycling machines or products. So a little thank you in form of a mention should be easy to give back :)

Featuring: We are always stalking the community to find inspiring creations to feature and collaborate. But we can only do that on our social media or videos, if we actually FIND you and see that you are connected to Precious Plastic.

5.4 Feedback & Support

Your feedback is valuable!

Finding errors and typos in the Academy? Have an idea to improve the machines? Or other feedback for our solutions and platforms? Let us know! This is how we can improve Precious Plastic for you and for all the other people working on this.

The problems you encounter, inconsistencies, unclear descriptions or things that just feel like they could be improved is all very valuable feedback for us to fix issues and grow better, together.

The best place to give us this feedback is on the discord channel #feedback or via email to: community@preciousplastic.com

Support open-source solutions

We will always keep Precious Plastic developments open-source for everyone to benefit from. However, it's a constant challenge to fund this way of working. You can help us to continue this work with a **single donation** or by **supporting monthly on Patreon**.
support.preciousplastic.com

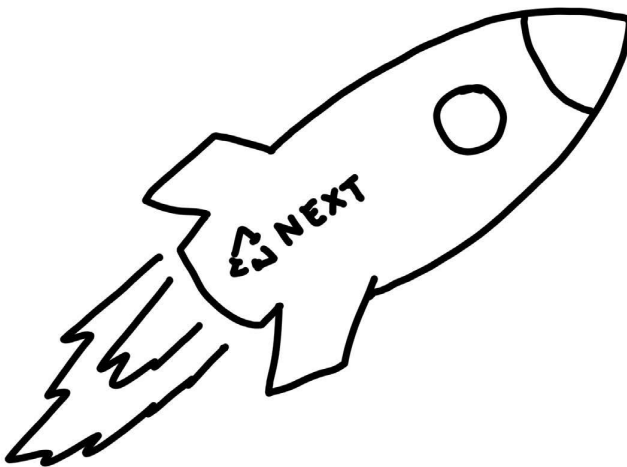
Precious Plastic is a project by **One Army**, tackling global problems to protect planet earth. We use a platform called Patreon, where everyone can become part and support these projects. Your money can fund materials for research and development, bills, rent, food for the team - and sometimes maybe a piece of chocolate :)
www.patreon.com/one_army

Thanks for your support! Hooray plastic recycling!

5.5 Take it to the next level

Precious Plastic provides you with the basic framework to run a recycling workspace effectively. It is up to you (and your team) to bring it to the next level. Create new products, new moulds, hack the machines, maybe make new ones, invent, collaborate with other craftsman, experiment, share your knowledge, teach other people, invent new reward systems to collect plastic or bring new people to the workspace - you never know where winning solutions will come from. Be open and collaborative.

We look forward to see where you and your team can take this project, pushing the limits of plastic!



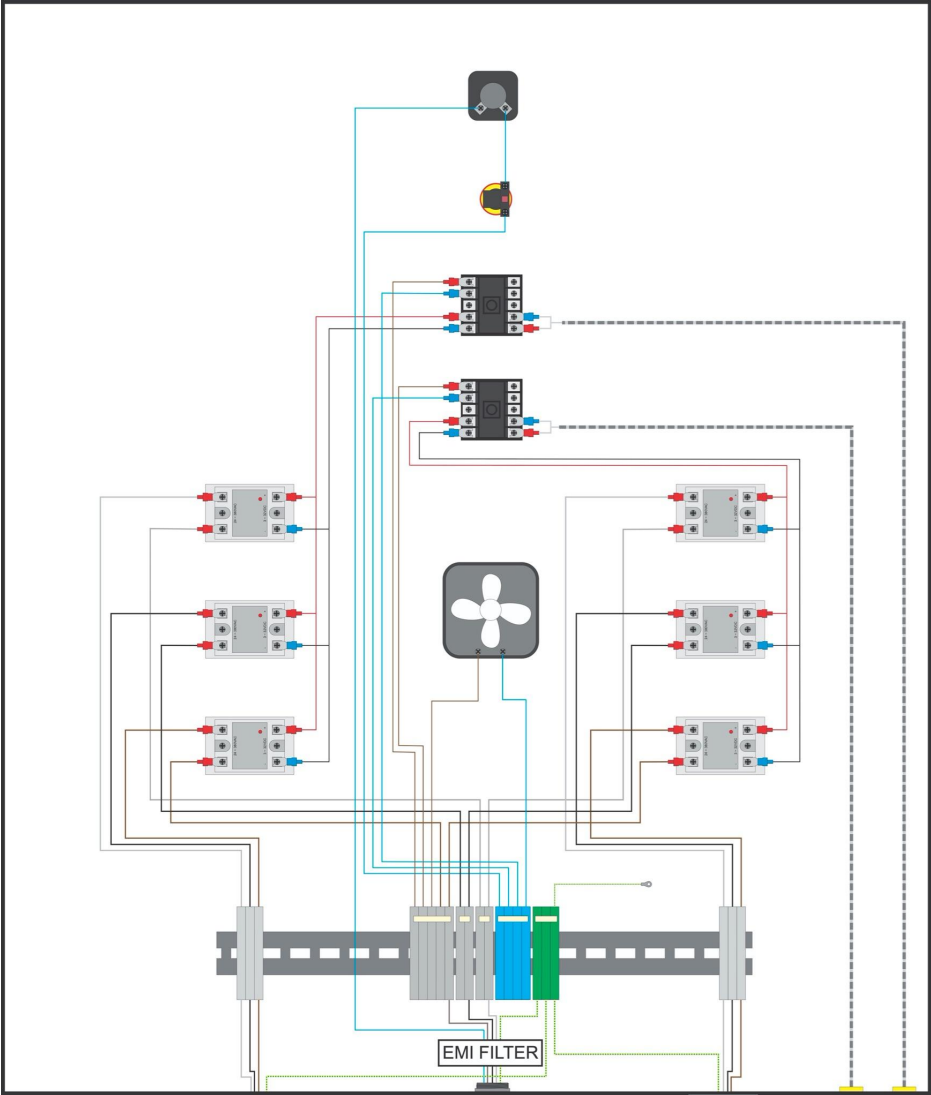
6.0 Technical Documents

6.1 List of recommended spares

Item	Details/Part no
Cartridge heaters	400W, 380V, 12x100mm
Heat resistant wire (up to 300°C)	4mm
PID controller	240v
50A SSRs	RM1A48D50
Replacement bearing	SCExxLUU

6.2 Electrical control box

Below is a graphical representation of the control box wiring. Any work conducted inside the box shall be carried out by a licensed professional.



HAVE FUN!

