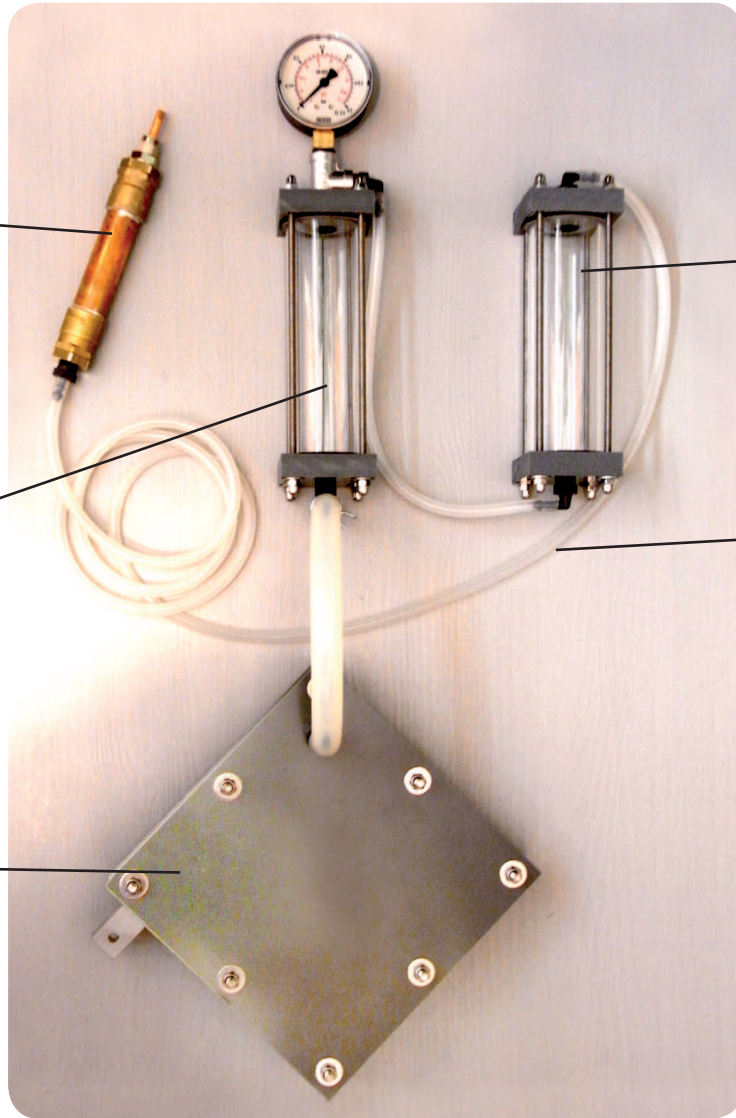


Assembly Instructions: Small ^{DIY} DRYCELLKIT

It consists of:



“Arrestor” Kit
straight nozzle p. 10
90° nozzle p. 12

“Small Bubbler” Kit
p. 8-9

“Small Water Storage” Kit
p. 6-7

Small Accessories Set (partly shown)
p. 16

“Small DryCell” Kit
p. 4-5

Optional: Small Mounting Kit
(not shown)
p. 14-15

“FreeFromFuel” DIY Manual (Printed Manual + DVD)

It is an important part of this DIY kit, where we explain everything that does not fit in here: Fascinating applications, tuning, helpful hints in case of problems, background information,...

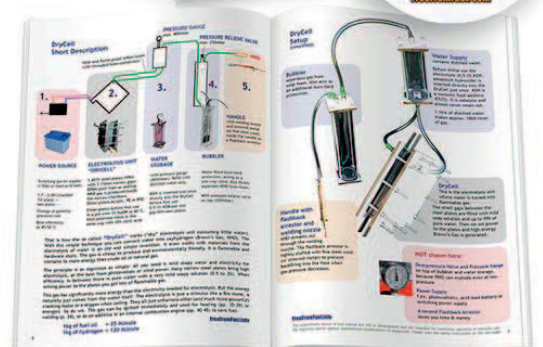
Did you know...? In the printed manual you will also find your password to the customer update area of FreeFromFuel.com



Not included: Power Source

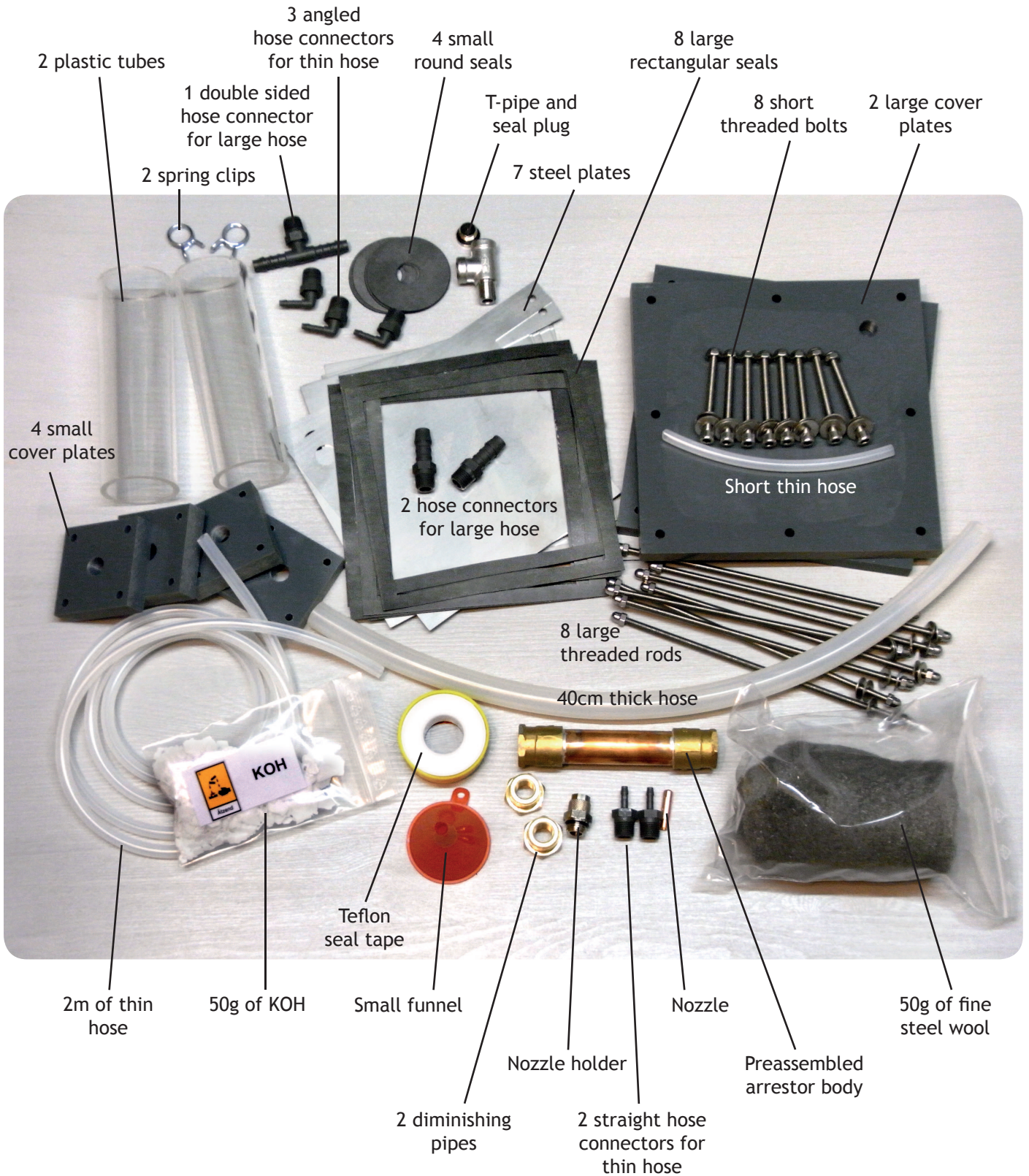
Everyone uses the DryCell differently, so of course a power source is not included. You can use a car battery, a switching power supply, a photovoltaics system,...

We explain more about power sources in the printed manual, and in the customer update area of FreeFromFuel.com



Contents:

On the front page you saw how the Small DryCell DIY Kit looks like in the end.
First it's more like this:



Important: Any parts of the "Small Mounting Kit" (see p. 14) and other optional parts are not shown here.

Read the safety instructions on the last page!

The Assembly Instructions you are currently reading (PDF or printout)

Not shown here, because you are reading them right now.

Here we show you how to assembly your DryCell Kit without any expert knowledge. You just need some common tools.

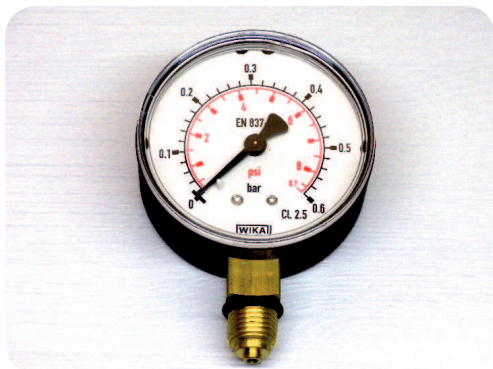
“FreeFromFuel”-Instruction Set (Manual + DVD)

You will need it as soon as you finished assembling your DryCell. The instruction set is an important part of this DIY kit. Therein we explain everything that does not fit in here: Fascinating applications, tuning, helpful hints in case of problems, links to other inventions, and much more.

Did you know...? In the printed manual you will also find your password to the customer update area of FreeFromFuel.com



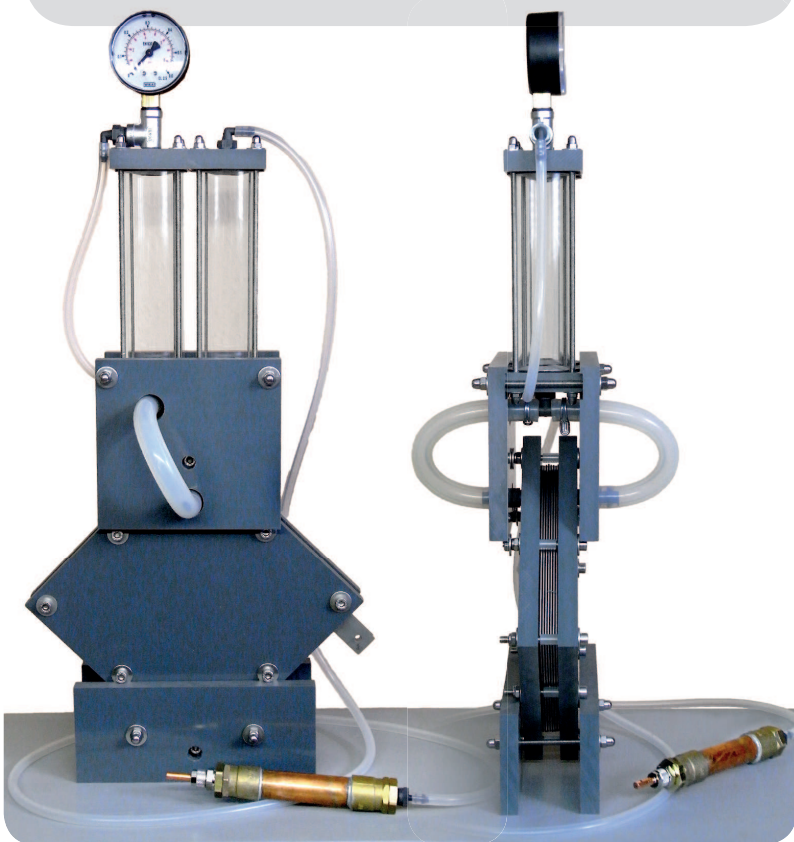
Optional: Pressure Gauge
e.g. WIKA 600mbar



Optional: Kit for a 2nd Arrestor
with straight nozzle or 90°-nozzle



Optional: Small Mounting Kit
holds the Small DryCell Kit in position

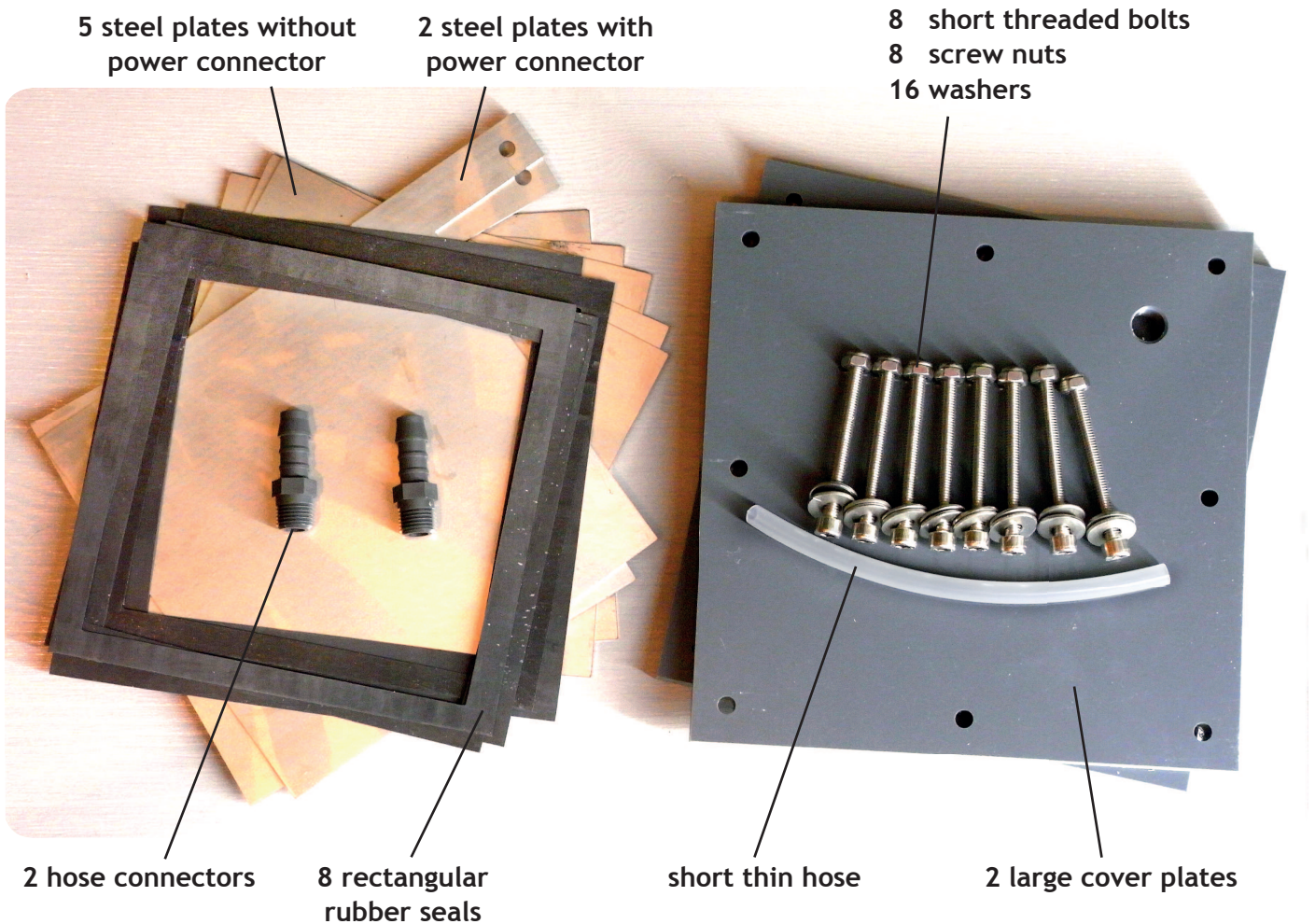


You find lots of fine pre-assembled spare parts and accessories to order in the customer area of FreeFromFuel.com!

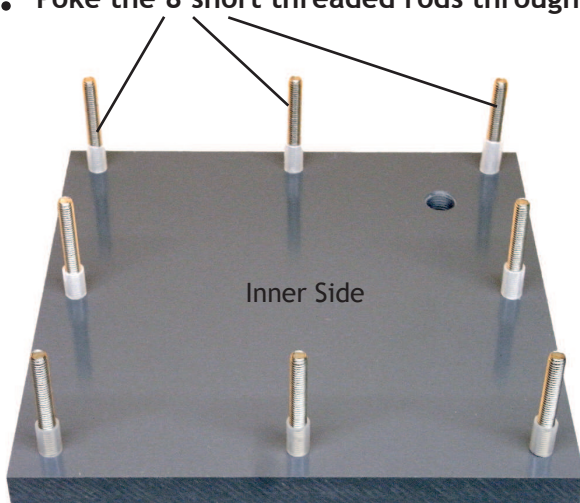
Read the safety instructions on the last page!

“Small DryCell” Kit Assembly

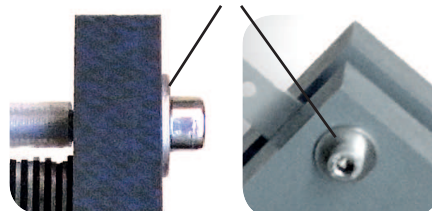
The kit consists of:



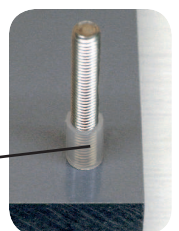
1. Poke the 8 short threaded rods through the 8 holes of one cover plate.



Insert a washer on the outside each time:



2. Cut the short hose into 8 pieces of *exactly* 13mm. Slip them onto the threaded rods as far as possible. They will prevent short circuits between the plates.

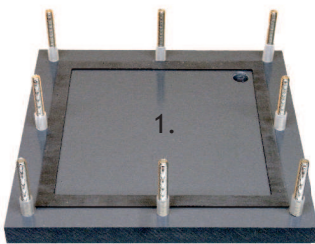


Read the safety instructions on the last page!

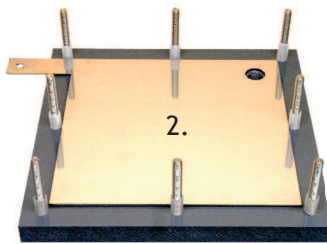
3. Clean and passivate steel plates before assembling.

This makes your DryCell more efficient and more rust proof. First clean the plates with Acetone (nail polish remover) and a soft cloth. Rinse well. Touch with gloves only to keep it clean. Passivation: Heat up plates in a large pot with 20% citric acid (= 200g per 1l water) up to 60°C for 20 minutes. Rinse and assemble.

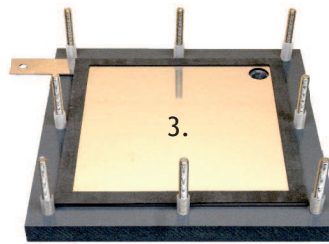
4. Alternately apply to the cover plate:



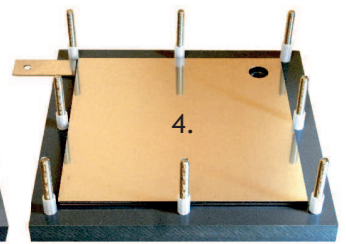
First rubber seal



First steel plate with power connector edge



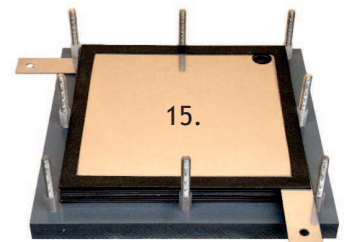
Second rubber seal



First normal steel plate

Continue alternately applying 1 rubber seal and 1 steel plate, and so on. The very last plate is the second steel plate with a power connector edge (as seen on picture no. 15). Cover it with the last rubber seal.

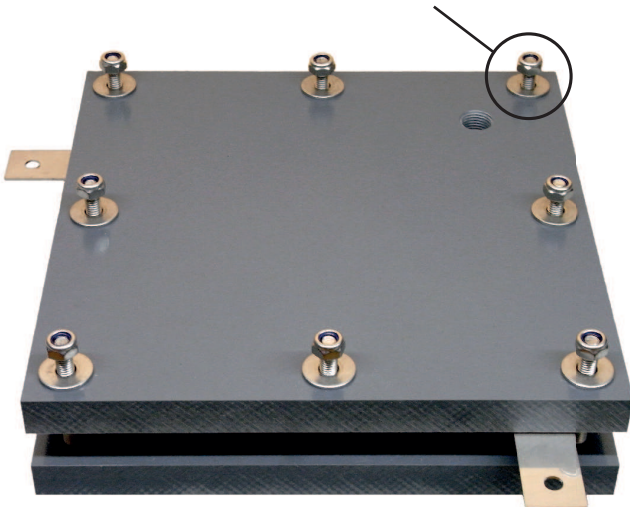
Important: All the plates have one blowhole. All of these blowholes must be exactly on top of each other! This is for the gas outlet.



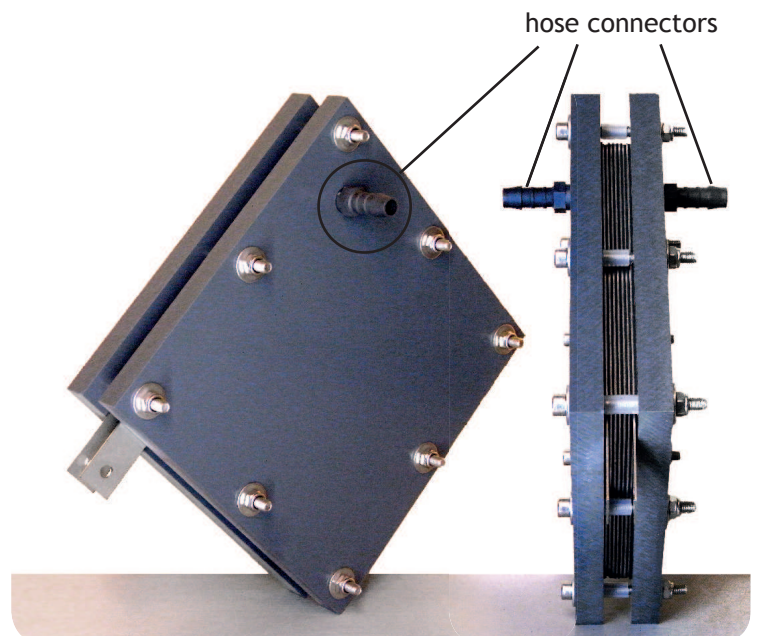
Last steel plate again has a power connector edge. Cover with last rubber seal.

5. Apply second cover plate. Screw DryCell together *tightly* with the remaining washers and screw nuts.

On both cover plates: Do not tighten the screw in the corner next to the blowhole. It will help you to mount the hose connectors much easier.



6. Screw the 2 hose connectors into the blowholes.



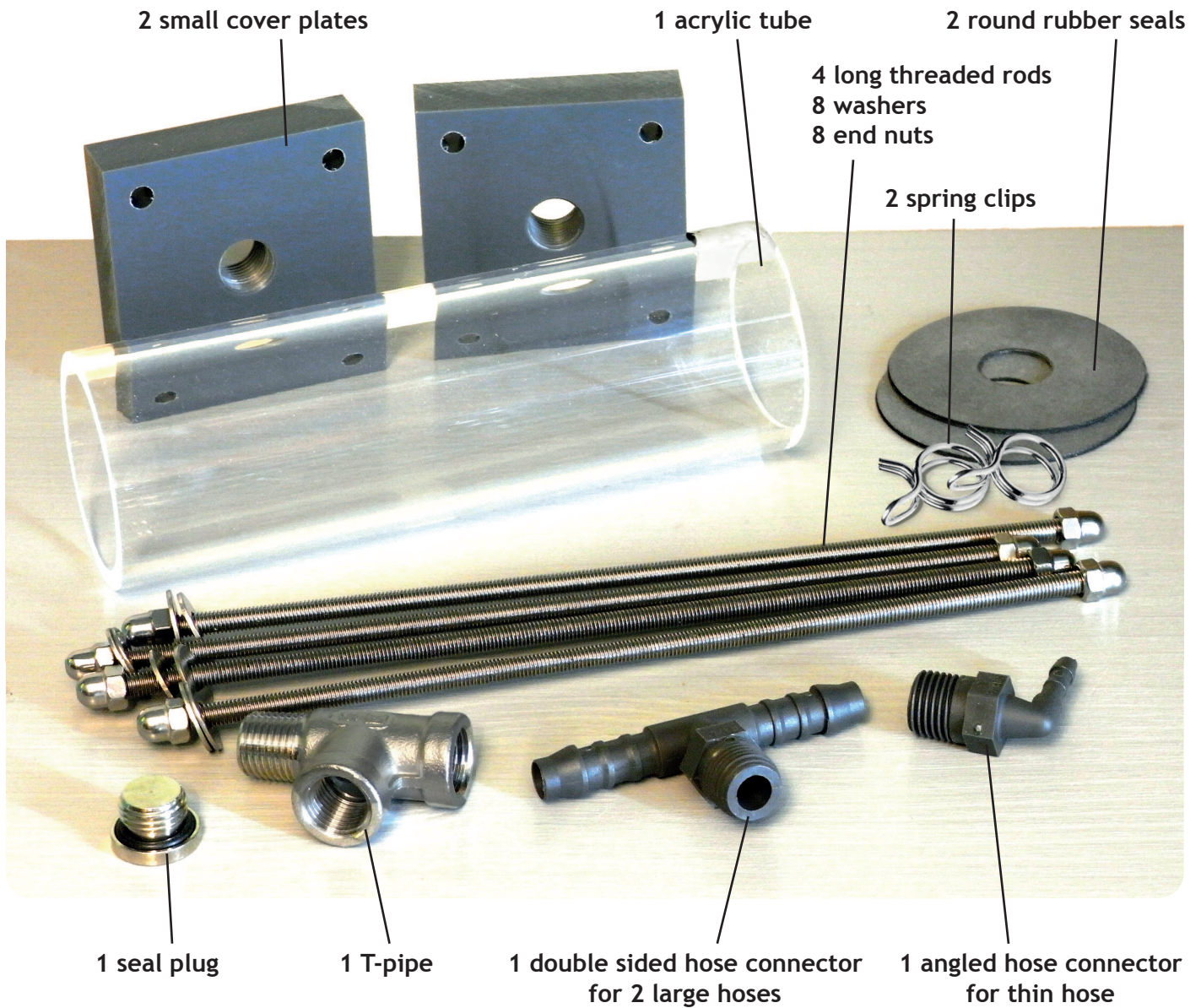
Wrap each hose connector thread with a few rounds of teflon tape (from the Small Accessories Set, see p. 16) before screwing it in. Now you can tighten the screws next to the hose connectors. Tighten *all* screws! The DryCell must be airtight!

7. Done! Now how to use the DryCell? We explain this in the comprehensive printed manual of the "FreeFromFuel"-Instruction Set (printed manual + DVD). It is an important part of this DIY kit.

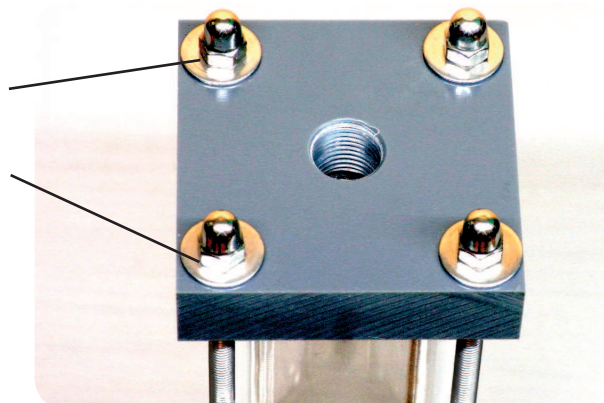
Read the safety instructions on the last page!

“Small Water Storage” Kit Assembly

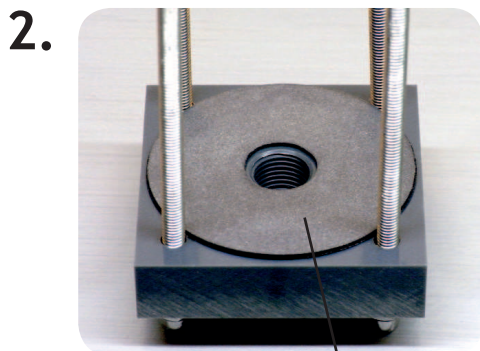
The kit consists of:



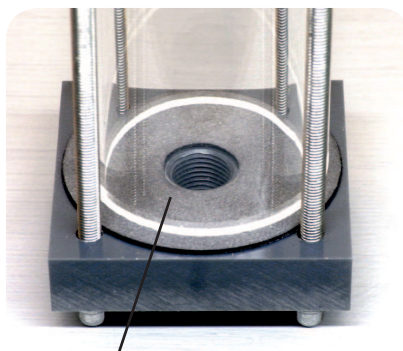
1. Poke the 4 long threaded rods through the holes of a cover plate. Secure them with washers and end nuts.



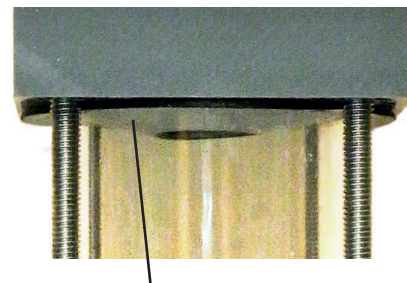
Read the safety instructions on the last page!



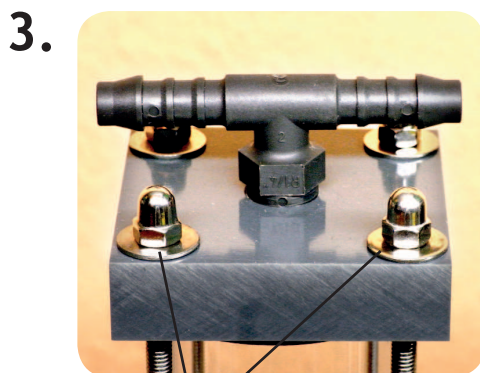
Turn it upside down, apply round rubber seal centred



Apply acrylic tube on top of the rubber seal



Put the second rubber seal on top of the tube. Apply the second cover plate on top.

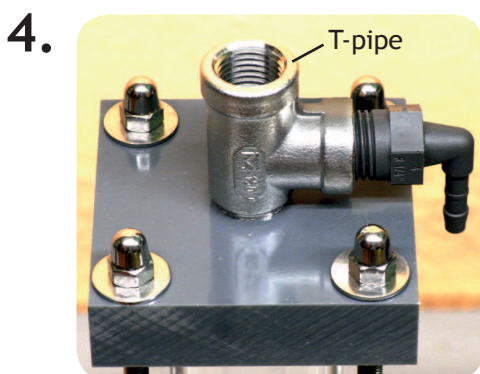


Tighten with 4 remaining washers and 4 end nuts.

Wrap teflon tape onto thread of the double sided hose connector. Screw into the middle hole.



Cut thick hose (from Accessories Set) into halves. Tighten with spring clips to the double sided hose connector.



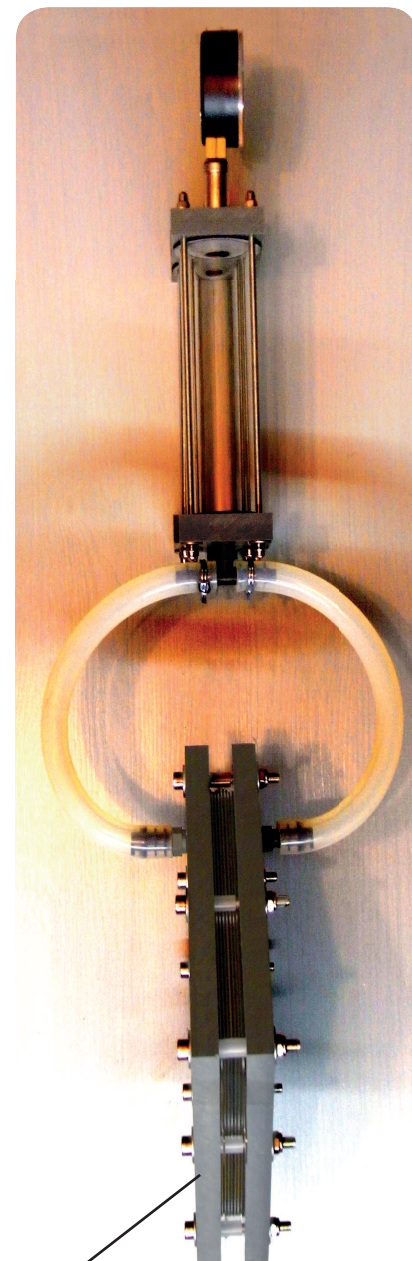
Turn upside down.

Wrap T-pipe with teflon tape. Screw into middle hole. Wrap teflon tape onto outer thread of angled hose connector. Screw into side outlet of T-pipe.



If no pressure gauge available: Screw seal plug into upper outlet of T-pipe (gasket enclosed with plug).

Optional: Mount pressure gauge instead of plug (gasket enclosed with pressure gauge).

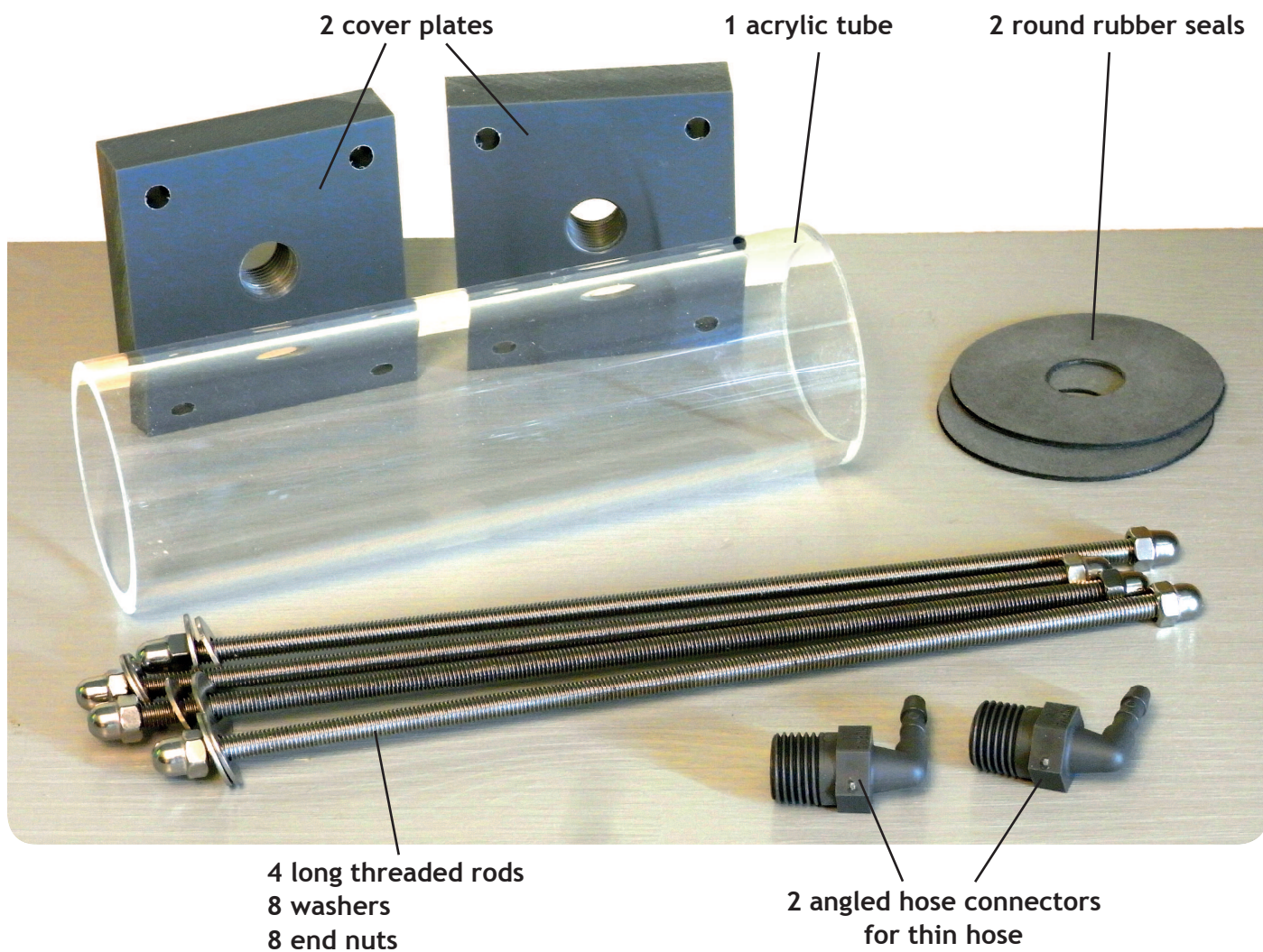


5. Done! This is how the water storage is connected to the DryCell. We explain its use in the comprehensive printed manual of the “FreeFromFuel”-Instruction Set (printed manual + DVD). It is an important part of this DIY kit.

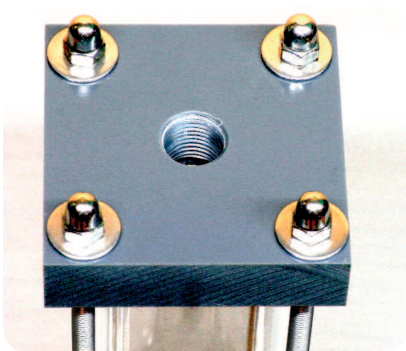
Read the safety instructions on the last page!

“Small Bubbler” Kit Assembly

The kit consists of:

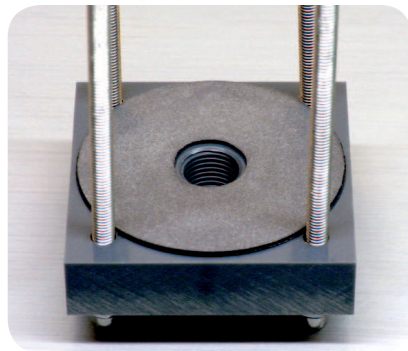


1.



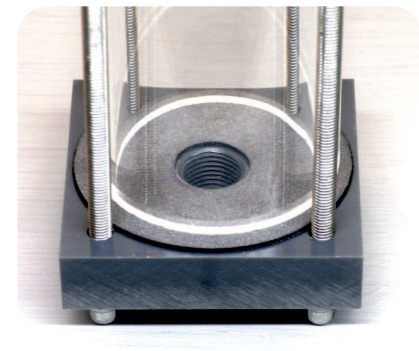
Poke the 4 long threaded rods through the holes of one cover plate. Secure them with washers and end nuts.

2.



Turn Bubbler upside down. Apply a round rubber seal centred.

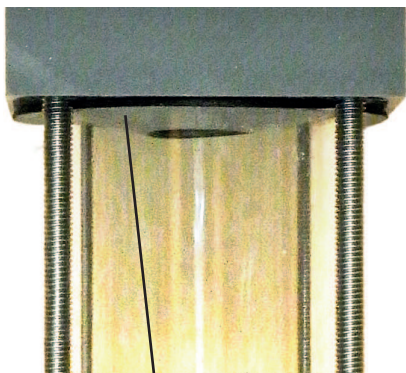
3.



Apply acrylic tube on top of the rubber seal

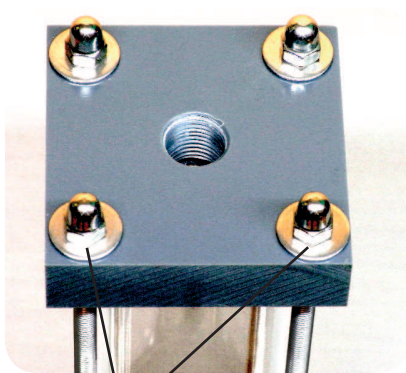
Read the safety instructions on the last page!

4.



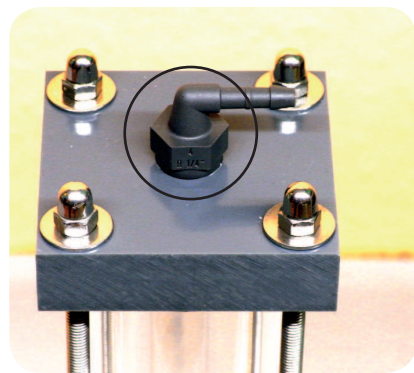
Put the second rubber seal on top of the tube. Apply the second cover plate on top.

5.



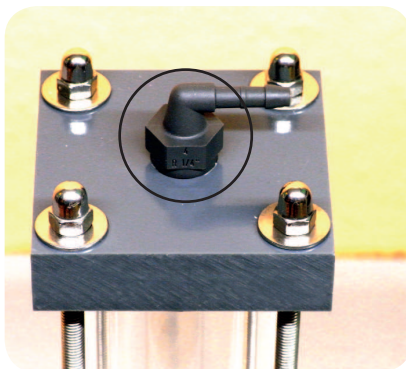
Tighten with 4 remaining washers and 4 end nuts.

6.



Wrap teflon tape onto thread of one hose connector. Screw into the middle hole.

7.



Turn upside down again.

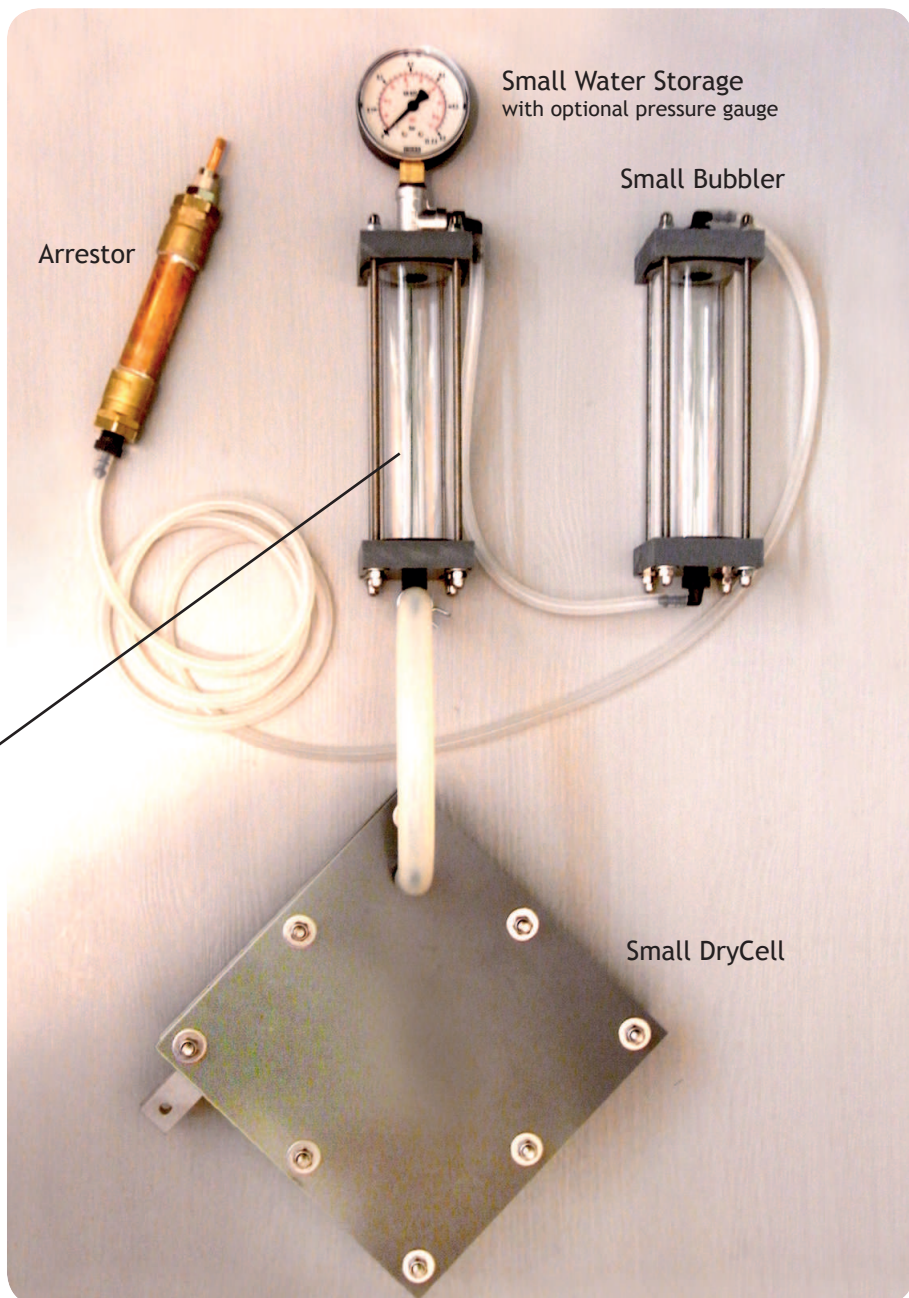
Wrap teflon tape onto thread of the other hose connector. Screw into the remaining middle hole.

8.

Done!

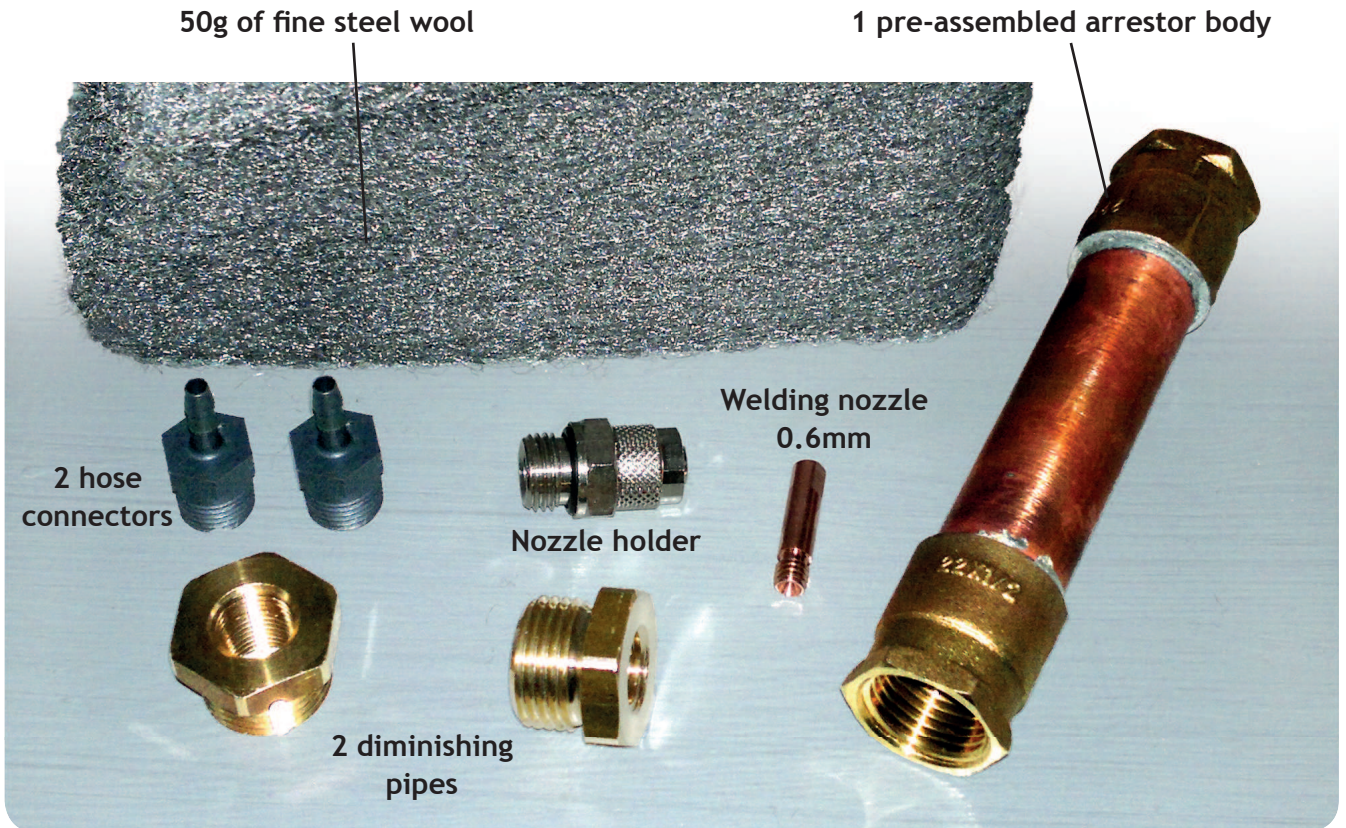
This is how the water storage is connected to the DryCell.

We explain its use in the comprehensive printed manual of the "FreeFromFuel"-Instruction Set (printed manual + DVD). It is an important part of this DIY kit.

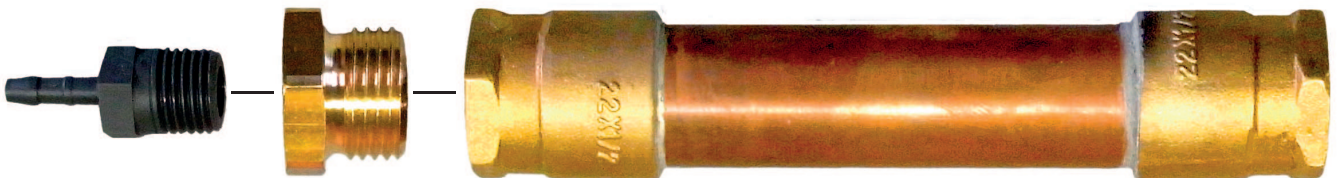


“Arrestor” Kit (straight nozzle) Assembly

The kit consists of:



1. Screw 1 hose connector and 1 diminishing pipe into pre-assembled arrestor body. Wrap teflon tape onto all threads.



2. Stuff the steel wool tightly into the arrestor body. Best use a wooden spool handle for this. Spare just a tiny bit of steel wool for later.



Read the safety instructions on the last page!

3. Pressure test:
Blow into the flashback arrestor as hard as you can.

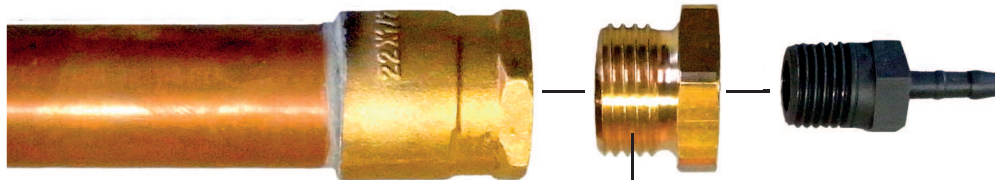
Air hardly gets through?
The arrestor is well stuffed.

Blowing is easy?
Stuff harder until almost all steel wool is inside.



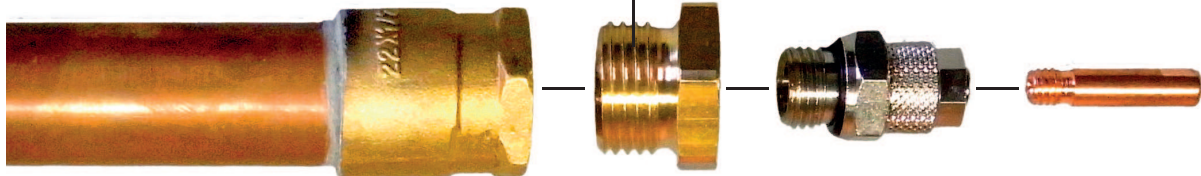
4. Now assemble the other side.
Seal all threads with teflon tape as before.

Variant 1 (using two Arrestors in serial):
First Arrestor with hose connectors on both sides:



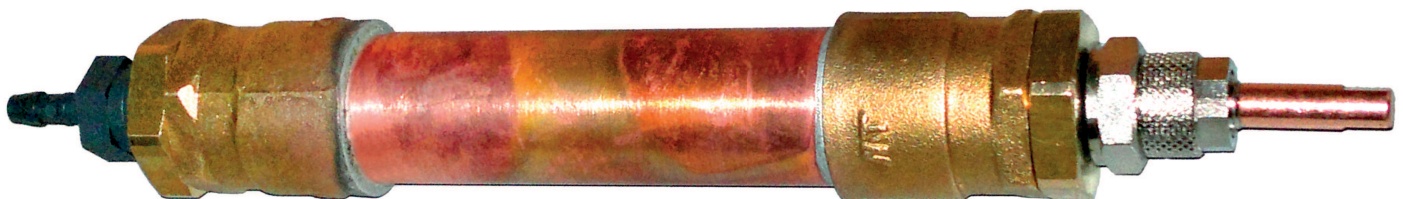
After screwing second diminishing pipe in,
stuff the remaining steel wool tightly inside the remaining hollow space.

Variant 2:
Second Arrestor with straight nozzle:



For maximum security we advise using 2 Arrestors in serial.

5. This is how the Arrestor finally looks like (shown with straight nozzle):

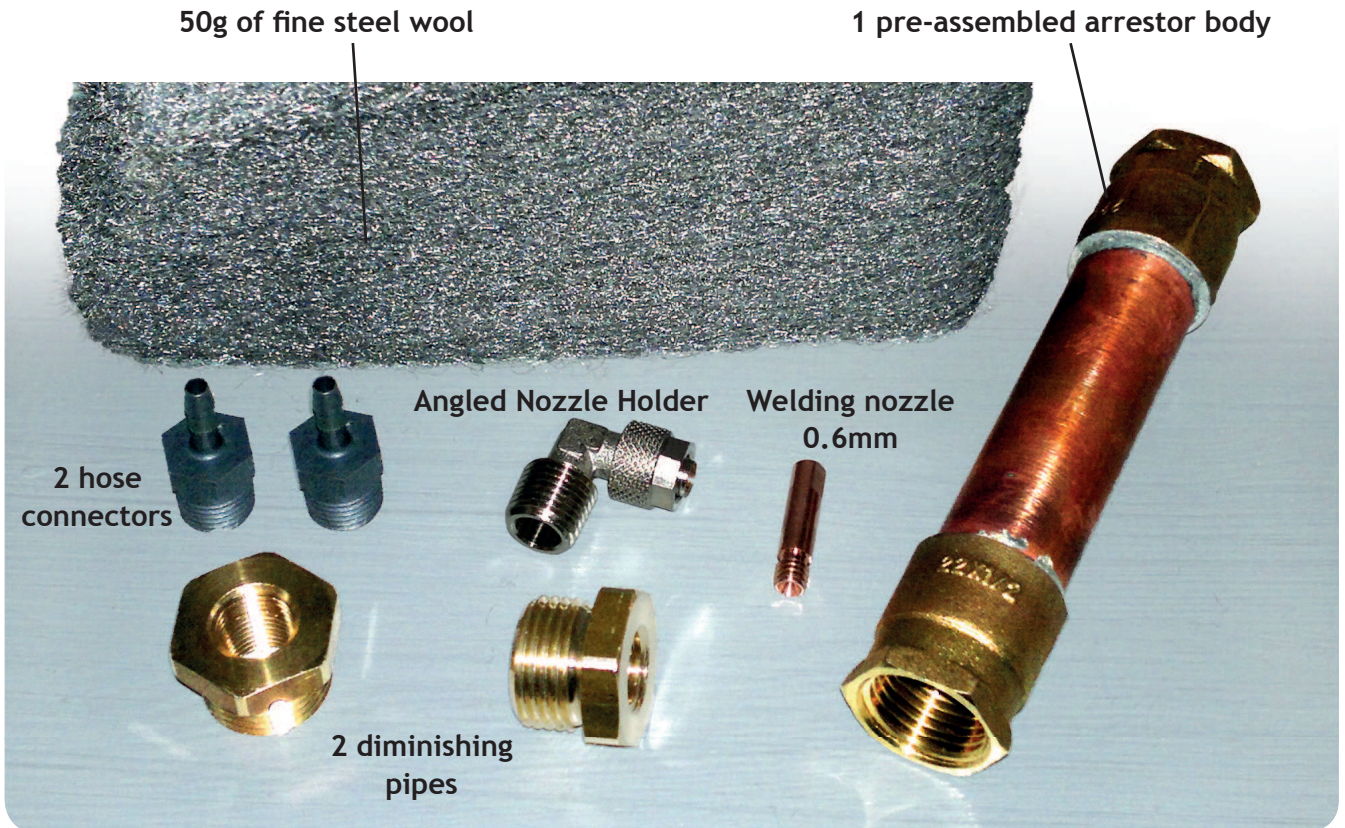


We explain its use in the comprehensive printed manual of the “FreeFromFuel!”-Instruction Set (printed manual + DVD). It is an important part of this DIY kit.

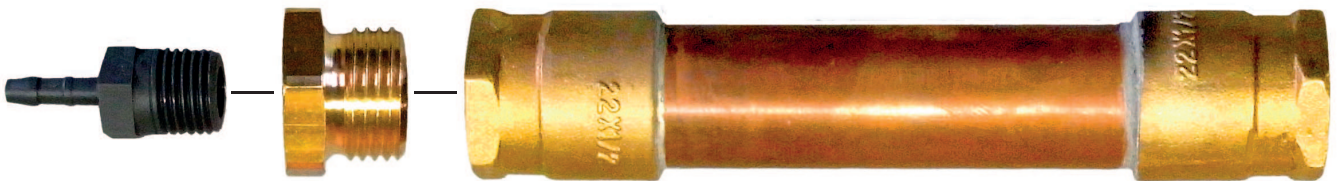
Read the safety instructions on the last page!

“Arrestor” Kit (90° angled nozzle) Assembly

The kit consists of:



1. Screw 1 hose connector and 1 diminishing pipe into pre-assembled arrestor body. Wrap teflon tape onto all threads.



2. Stuff the steel wool tightly into the arrestor body. Best use a wooden spool handle for this. Spare just a tiny bit of steel wool for later.



Read the safety instructions on the last page!

3. Pressure test:
Blow into the flashback arrestor as hard as you can.

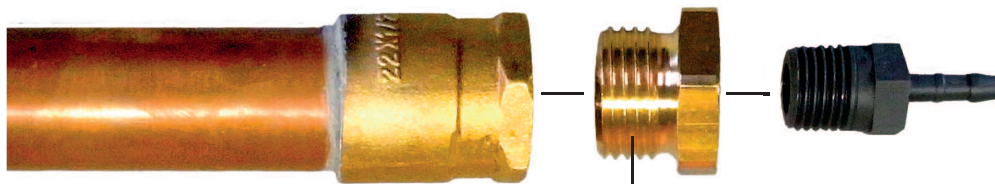
Air hardly gets through?
The arrestor is well stuffed.

Blowing is easy?
Stuff harder until almost all steel wool is inside.



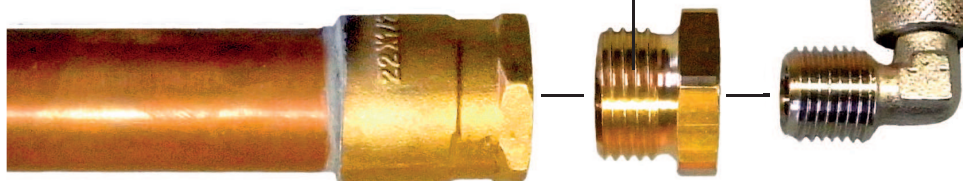
4. Now assemble the other side.
Seal all threads with teflon tape as before.

Variant 1 (using two Arrestors in serial):
First Arrestor with hose connectors on both sides:



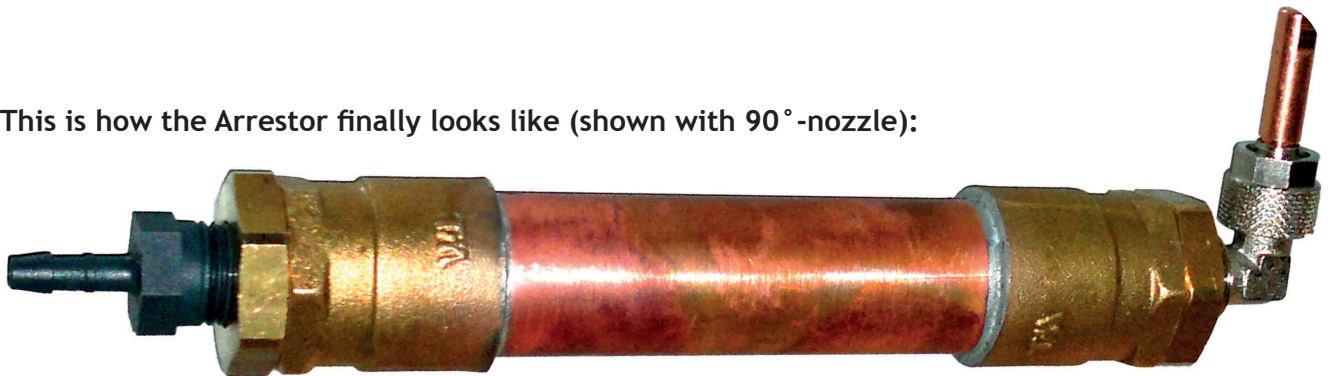
After screwing second diminishing pipe in,
stuff the remaining steel wool tightly inside
the remaining hollow space.

Variant 2:
Second Arrestor with straight nozzle:



For maximum security we advise using 2 Arrestors in serial.

5. This is how the Arrestor finally looks like (shown with 90°-nozzle):



We explain its use in the comprehensive printed manual of the “FreeFromFuel”-Instruction Set (printed manual + DVD). It is an important part of this DIY kit.

Read the safety instructions on the last page!

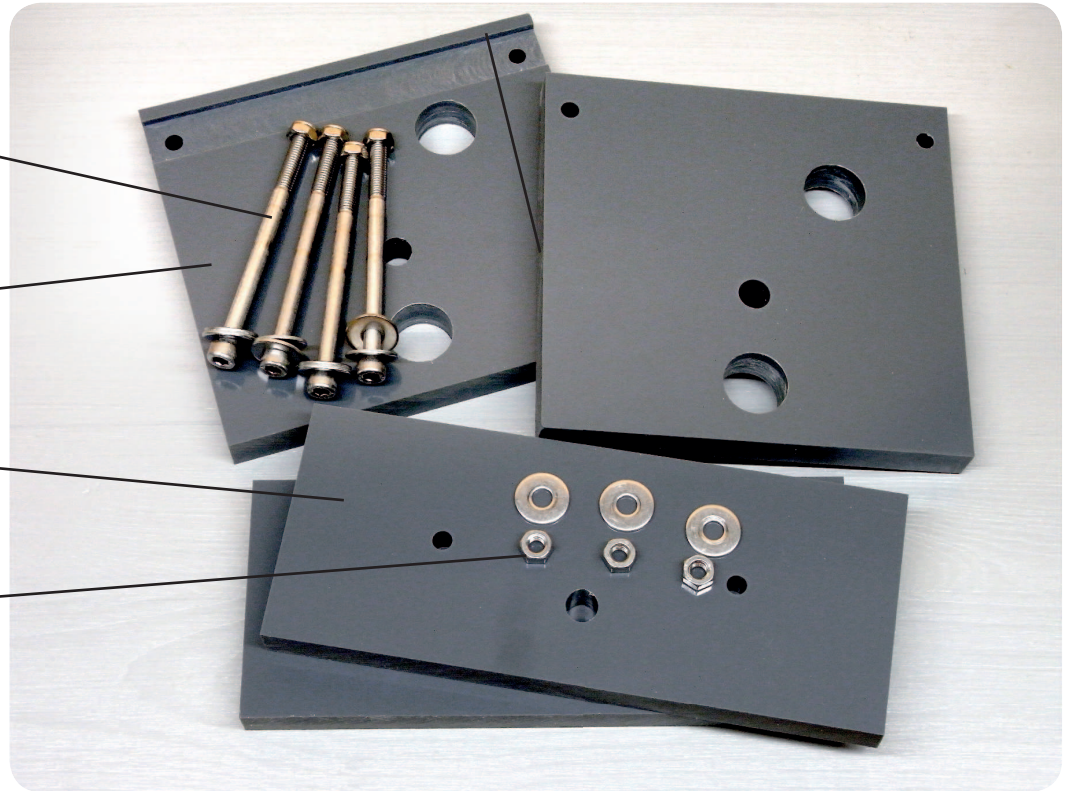
Optional “Small Mounting Kit” Assembly

4 bolts
8 washers
4 end nuts

2 larger plates
for holding the tubes

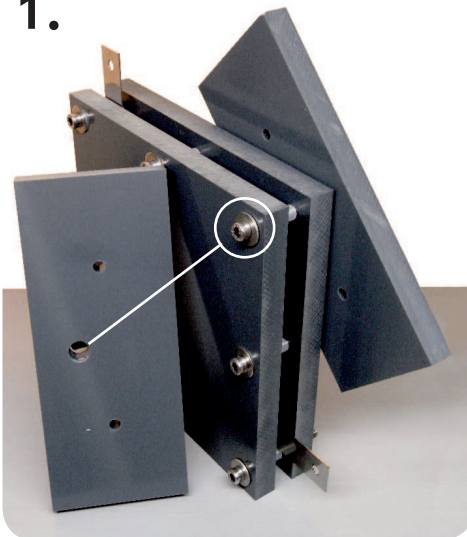
2 long plates
for the stand

3 screw nuts
3 washers



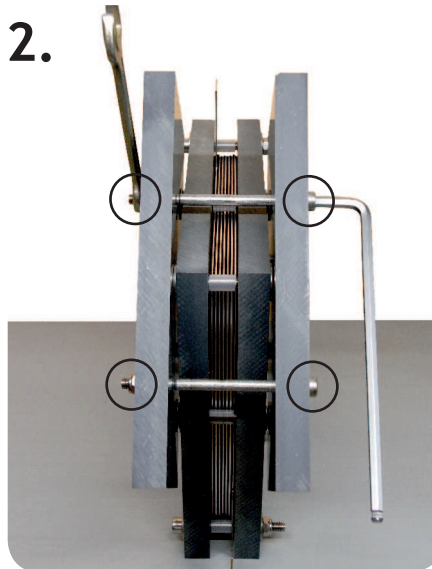
Assembly for the Small DryCell Stand
(images 1+2):

1.



Attach the 2 long plates with their larger hole onto the DryCell screws that are diagonally across from the hose outlet. Image 3 shows how it looks like when it's assembled.

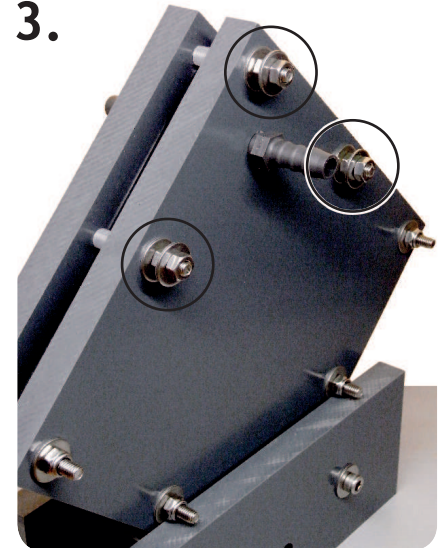
2.



Poke 2 bolts through the other holes of the long plates. Tighten with washers and end nuts. Screws must retain some flexibility, otherwise the stand will distort.

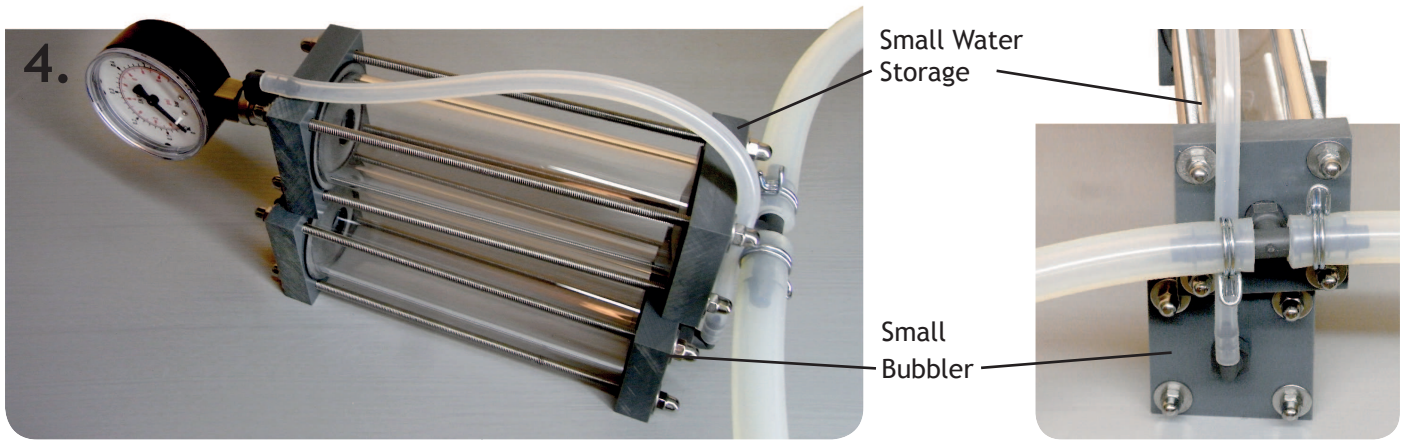
Assembly for the Small Tubes Holder (images 3-7):

3.

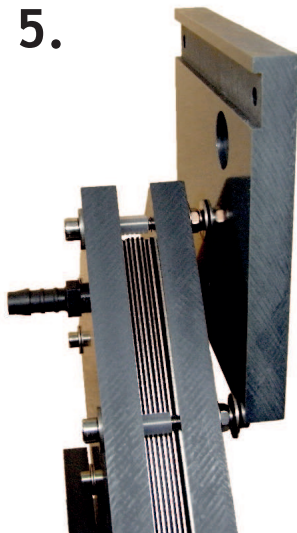


Position DryCell onto its new stand. Now add *another additional* washer and screw nut to each of the upper 3 threaded rods of the DryCell.

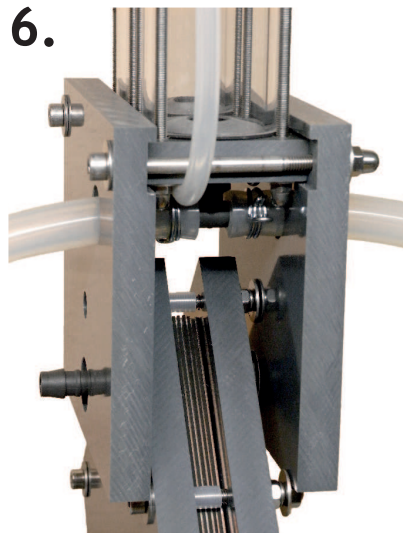
Read the safety instructions on the last page!



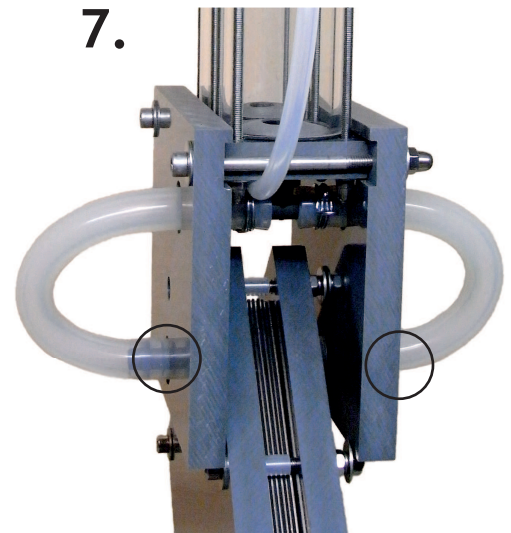
4. Pull off hoses from Water Storage and Bubbler (if already mounted). Reconnect hoses as shown.



5. Attach one of the larger plates onto the DryCell. The 3 additional screws (that you screwed onto the DryCell) now fit into the holes of the plate.



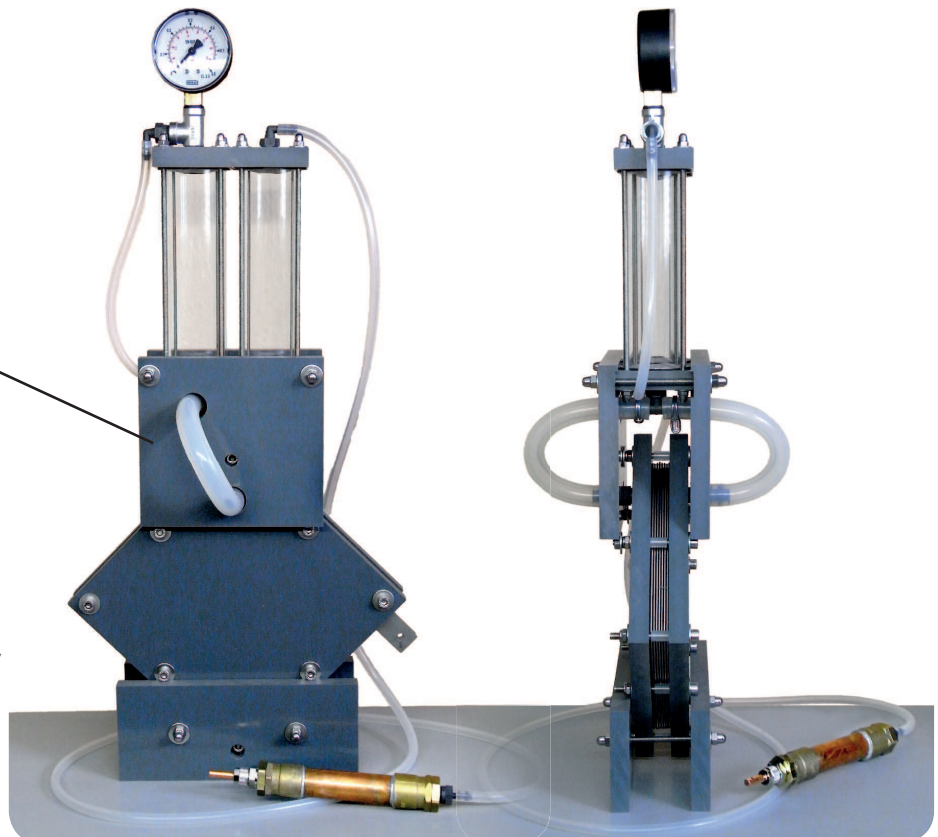
6. Fixate Water Storage and Bubbler next to each other in the notch of the plate. Feed hoses through the plates as shown. Now attach second plate and secure it with remaining 2 bolts, 2 washers and 2 screws. Reattach hoses as on image 7.



Reminder:

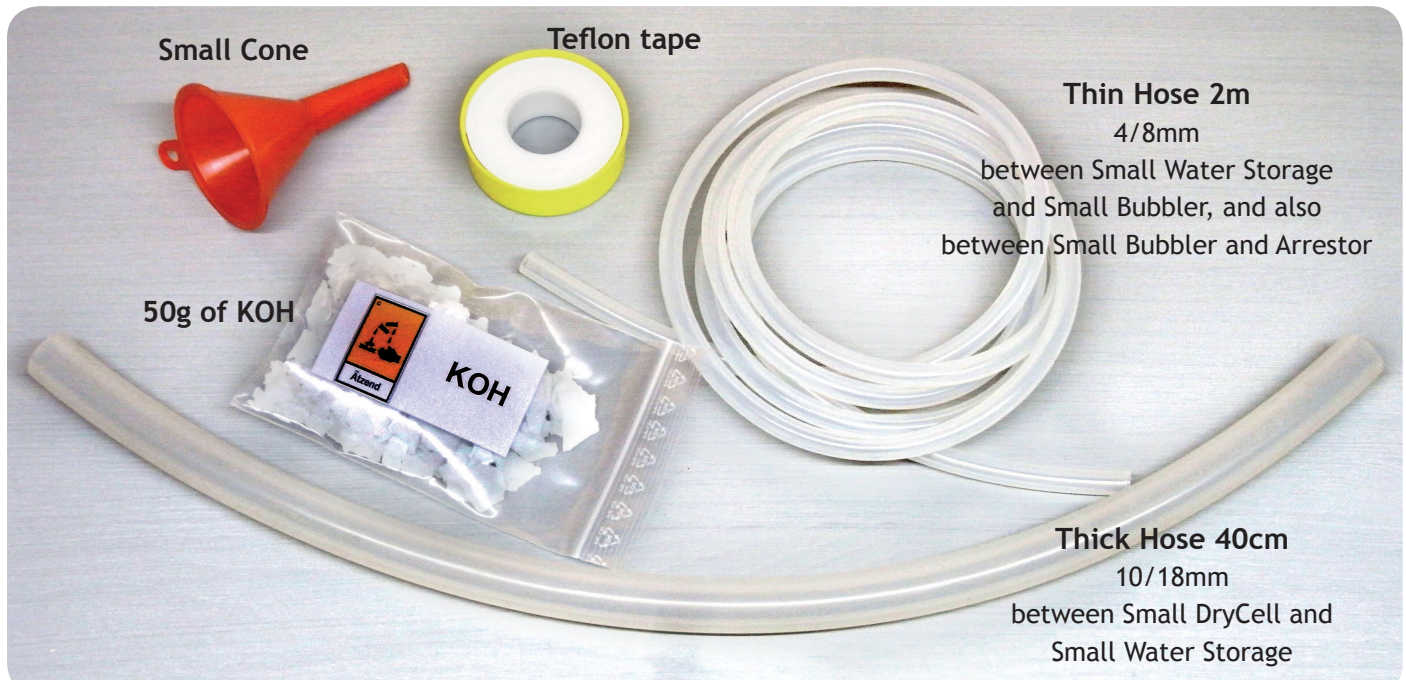
- The Small Mounting Kit only fits to the Small DryCell Kit.
- The Large Mounting Kit only fits to the Large DryCell Kit. (not shown here)

You find lots of pre-assembled spare parts and accessories to order in the customer area of [FreeFromFuel.com!](http://FreeFromFuel.com)



Read the safety instructions on the last page!

“Small DryCell Accessories Set”



Please Read! Important Safety Advice!

This is no bible. We can be wrong at any time. This manual is for adults only. Use at your own risk. Replicate only if you are an experienced technician. Consult an authorized specialist if you are uncertain with any aspect of this manual. This manual is for information purposes only. The experiments shown in this manual are in development still and intended for experienced technicians only.

Keep away from others, especially from children, animals, furniture, beverages and food. Keep away from mobile phones, weapons, explosives and flammable materials. Do not smoke. Do not try this at home. Do not try this outdoors. Keep away from rain, fire, puddles, storms and any other influences of weather. Work in a dry and appropriate environment suitable for technical experiments, such as a machine workshop. Good air ventilation is absolutely necessary. Always keep a fire extinguisher at hand. Be cautious, some materials can get very hot during manufacturing or experiments. Do not work if you feel ill, sleepy or if you are drunk. Handle acids and lyes with care. Never try to swallow distilled water, acids, lyes or any other chemicals. Keep chemicals away from skin and face. In case of an emergency call the ambulance or an emergency doctor. Store all chemicals in their original containers only. Always wear protective clothing, protective glasses, protective gloves, protective footwear and ear protection! Risk of explosions! Oxyhydrogen is highly flammable and can explode even at low pressures without warning. Take care of live wires. Mortal danger at above 60 Volts (may differ depending on your local authorities). Always isolate conducting electrical wires and components to prevent short circuits, injuries or damage to the environment. Disconnect from power before you touch anything.

This manual can contain errors and therefore all experiments are not intended for unattended or continuous operation or everyday use. We also strongly advise against the unauthorized modification of devices or vehicles. This can cause immediate loss of operating license, insurance protection or cause physical damage. Manipulation of existing units or devices are to be carried out by certified specialists only. Please also carefully note the safety instructions in the film.

Never let the DryCell run unattended. Never let Oxyhydrogen leak out indoors. Never inhale Oxyhydrogen. Always use DryCell with bubbler, 2 flame arrestors, pressure gauge and correctly installed pressure valve only. When using a welding nozzle, always check if the diameter is appropriate for the amount of gas from the DryCell. Back pressure can lead to explosions.

After assembling check all components for leak tightness prior to first use. Before first filling hold DryCell under water (no wires attached!), blow into one hose while keeping the other hose shut: The DryCell must be absolutely airtight.

We are not responsible for other publications, other authors, links and literature mentioned anywhere in the brochure or the film. We do not fully agree with them and we are not responsible for their works. We are all adults. Please judge for yourself and verify if uncertain. In case of doubt please consult authorised specialists.

Threats and patents are useless, the DryCell is Open Source already. Please publish further developments to help free knowledge remain free. Use your brain and common sense. Have a good time! :-)

In the “FreeFromFuel” DIY Manual (Printed Manual + DVD) we explain the use of this DIY kit. It is an important part of this kit. Therein you find everything that doesn't fit in here: Fascinating applications, tuning, helpful hints in case of problems, your password to the customer area of FreeFromFuel.com, and much more!

Imprint:

NewWorldTechnology Stefan Herrmann, Schöne Aussicht 65, 25582 Hohenaspe, Deutschland
in cooperation with FreeFromFuel.com, Boîte P. 761, 98870 Bourail, New Caledonia