

Solvent Filter

What is a Solvent Trap, Solvent Recycler or Solvent Filter?

It is a device attached to the end of a threaded barrel that collects all of the solvent and debris as it is cleaned from the barrel and ejected out the end. It also contains the "spray" associated with brushes exiting the barrel. These may be configured to allow for filtering of used fluid.

Solvent filters can be made from a variety of items. The most popular trend is to convert a flashlight tube (usually a Maglite) or purchase a fabricated housing.

Internal components are usually freeze plugs or machined cups.

Why use a solvent filter?

Different people clean firearms differently. Some choose to flood the barrel introduce a generous amount of cleaning fluid or solvent and then repeatedly run a wire brush through to ensure all contaminants and debris are removed. This action can result in a mess as well as expelled fluid ending up on the ground. This results in a waste of usable fluid as well as an environmental concern.

A solvent filter allows for the collection of fluid for proper disposal and can be converted into a recycler that will filter the expelled fluid allowing it to be re-used until it has lost its effectiveness.

Many people prepare for the worst, and keep these handy in case some day, no more cleaning solvent is available.

Why not use a bottle or bucket to collect used solvent?

It boils down to personal preference. We are not all the same and each of us prefer to purchase and use items that blend with our personalities although there may be cheaper items available that will perform similarly. Purchasing an item when less expensive options are available does not mean the person intends on using the item for nefarious purposes. Using a product that some others do not see a need for does not constitute intent to break a law. Numerous people use solvent traps and solvent filters for their intended and valid purposes.

- Why would someone prefer \$1000 Titanium pistol grips instead of the \$20 molded plastic ones?
- Why do some people buy extravagant purses costing 10's of thousands of dollars when a cheap bag will do?
- Why do some people buy \$500,000 cars when a \$25,000 one will get you to your destination?

We do not pretend to know the mind of people in any of these situations; we just know that none of us all want the same things for the same reasons.

Why is the HIT Solvent Filter better?

The HIT Solvent Filter/Recycler is a legitimate and fully functional filter. It works as designed for the purposes stated. This is a modular system that filters the solvent as it passes through a strainer and a series of increasingly finer mesh screens placed between the spacer caps. Larger debris and particles will be captured in the upper sections allowing for the collection of filtered solvent at the bottom. This allows the collected solvent to be re-used repeatedly until it has lost its effectiveness.

The solid end cap is designed to double as a solvent cup for further cleaning activities. It also has a M5 blind tapped hole to aid in storing spare parts.

A valve cap may be installed in the bottom of the device to aid in draining the solvent.

A threaded cap plug may be installed to prevent spills between uses.

The strainer and filter screens are supported by washers or spacer caps that are intended to prevent deflection and allow the solvent to flow through to the lower compartments for collection at the bottom. These separators funnel the expelled fluid through the center of the trap resulting in better performance and the ability to better inspect the debris. When using top caps or washers to prevent screen deflection, care should be taken to ensure that the bore brush or swab does not become lodged when it exits the barrel. In order to prevent this, we recommend the following minimum sizes:

- .22 bore brush and lower – M6 dome washer or 1/4" dome washer / spacer cap
- .30 bore brush and lower – M8 dome washer or 5/16" spacer cap
- 6.5mm bore brush and lower – M8 spacer cap
- 9mm bore brush and lower – 3/8" spacer cap
- .45 bore brush and lower – 7/16" spacer cap
- .453 bore brush and lower – 1/2" spacer cap

Like any washer, our Spacer Cap and washer sizes are based on the flat head screw used with these caps in other applications. This size designation does not refer to the through hole in the center of the washer or spacer cap. See the table below for dimensions.

Spacer Top Cap Screw Size	Cap OD	Cap ID	Flat Height	Suggested Use
1/4	1.338"	0.283"	0.079"	.223 and smaller
5/16	1.338"	0.374"	0.079"	.308 and smaller
3/8	1.338"	0.413"	0.079"	9mm and smaller
7/16	1.338"	0.512"	0.079"	.45 and smaller
1/2	1.338"	0.520"	0.079"	.458 and smaller
M8	1.338"	0.319"	0.079"	6.5mm and smaller

Thin Wall Spacers	OD	ID	Height
Size 2	1.34"	1.23"	0.199"
Size 3	1.34"	1.23"	0.396"
Size 5	1.34"	1.23"	0.98"

The washers/caps may be removed and replaced with additional spacers as needed.

Disassembly for cleaning or screen replacement is simple and efficient without the need for tools.

Customization

The usable inside height is 162mm. Any combination of parts may be used providing the overall stack height equals 162mm.

For practical purposes, the following stack height numbers may be used:

Spacer Cap = 2mm stack height

Size 5 spacer = 25mm stack height

Size 3 spacer = 10mm stack height

Size 2 spacer = 5mm stack height

Wave spring = 1mm stack height

Spacer caps may be swapped out to change the size while using the same tube, end caps and spacers.

Using the above reference heights, individual filtration stages may be shortened or heightened and additional spacer caps may be added in lieu of spacers in order to gain additional filtration stages. Additional spacers and spacer caps are available individually.

Dry Storage Tube

The HIT Solvent Filter/Recycler can be used as a multi-compartment dry storage tube with the addition of a second solid cap. Individual compartment length may be adjusted as desired based on the object(s) to be stored. The spacer caps used as compartment separators can be used for a stable surface to segregate parts while being used as dry storage. Switching between these two functions is simple and quick without the need for tools.

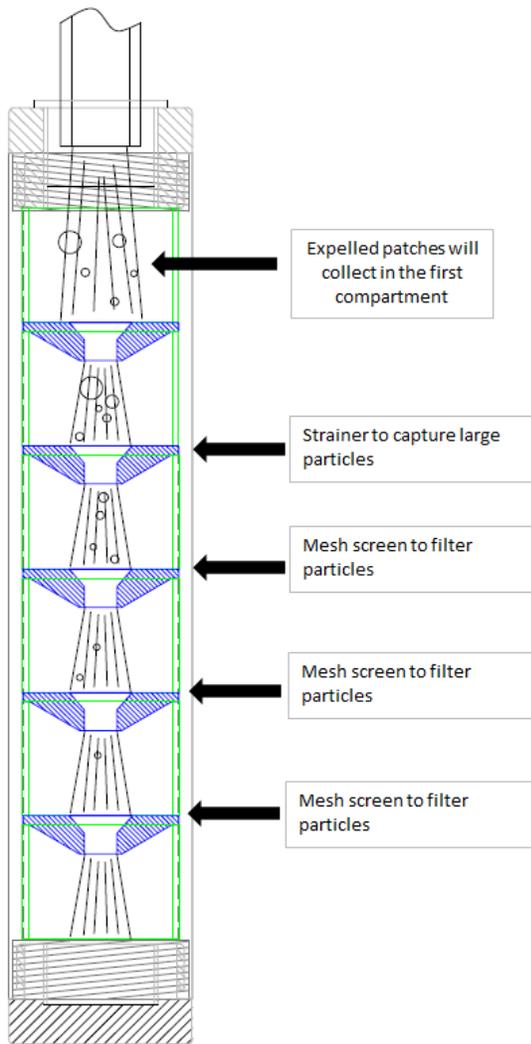
Converting

Converting the HIT Solvent Filter / Recycler into a dry storage tube is accomplished by disassembling the internals, removing the strainer, removing the filter screens, removing the wave spring washer and reassembling the remaining internal components. In order to maintain a tight fit of the internal components, spare parts are available. The threaded cap may be replaced with a spare solid cap or be plugged.

Converting the HIT Solvent Filter / Recycler back to the cleaning function is accomplished by disassembling the internals, re-inserting the components in their original configuration. The plug can be removed or the solid cap replaced with the threaded cap as applicable to allow proper mounting.

Intent

The HIT solvent Filter/Recycler is designed, manufactured, assembled and sold for the intended purposes as a cleaning device, or as a dry storage container. Any modifications or alterations for purposes other than those stated are not condoned by the seller or manufacturer and are the sole responsibility of the user. The manufacturer and seller are not responsible or liable in any way for misuse of the product.



Safety

It is the user's responsibility to follow all applicable laws.

Ensure firearms are unloaded prior to cleaning and never attach the filter to a loaded firearm.

For best results, ensure the assembly remains tight at all times.

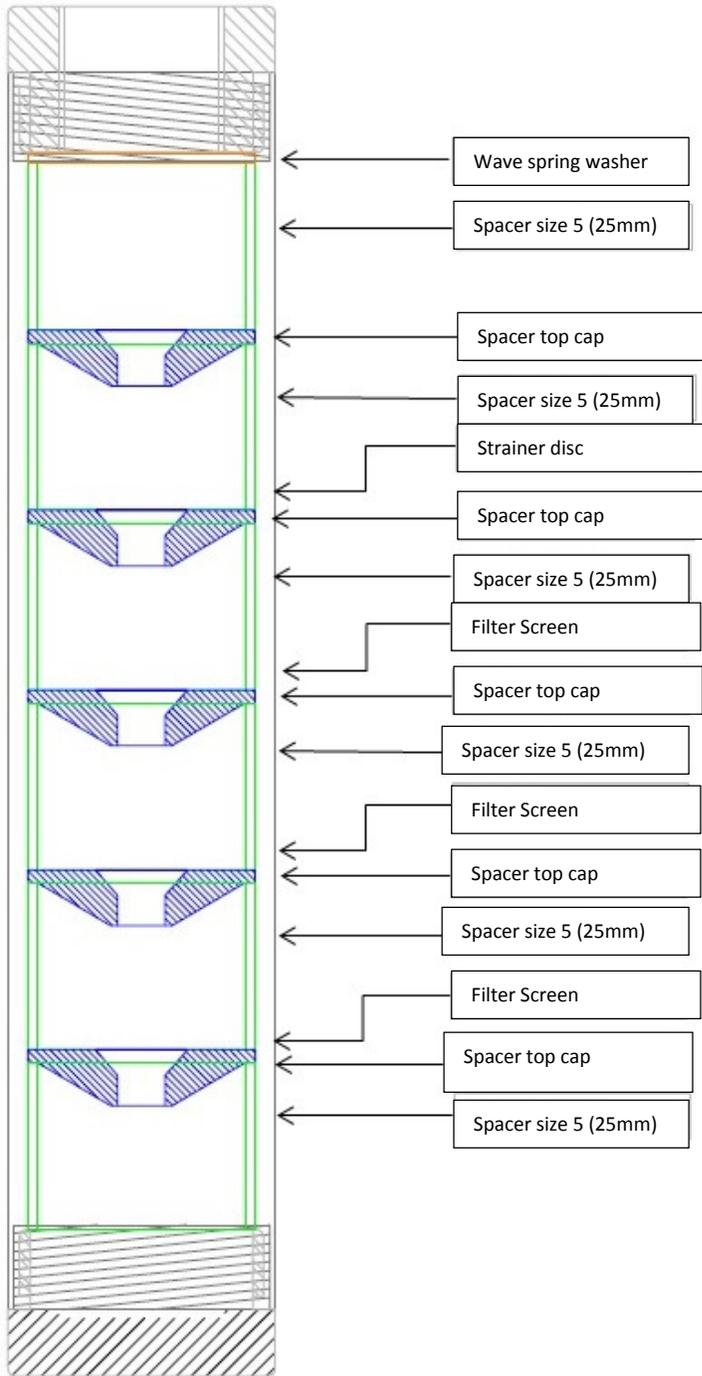
Use only as intended.

HIT is not responsible for misuse of the product.

The modular design of our filters allows for each user to configure it how they would like. All parts may be purchased separately or kits may be purchased.

In order to assemble a solvent filter / solvent trap, the following components are required:

- 1 Tube set
 - tube, solid end cap and a tapped end cap
 - 1 Internals set
 - 4 Size 5 spacers
 - 4 size 3 spacers
 - 2 size 2 spacers
 - 6 spacer top caps (size dependent)
 - 1 wave spring washer
 - 1 filtration pack 2
 - strainer, 20 mesh screen, 60 mesh screen, 100 mesh screen
- Barrel adapter – if using a 13/16-16 threaded end cap.



Example assembly:

Numerous configuration options are possible using different spacer cap sizes and spacer heights.

