

Applications for Small Filtration Devices: Suction Screens



Suction screens are some of the smallest filtration devices that prevent contamination particles from flowing through a system or they can merely be an aid in preventing airborne particles from entering equipment. They are low-cost, simple to install, and yet can prevent major headaches. Let's take a look at applications where suction screens can help.

Suction Screens in the Environmental Industry and Residential Industrial Market

One area where suction screens have become the "strainer" of choice because of their simplicity and low-cost, is in the environmental health industry of water and utilities departments of many communities nationwide. Where most communities now require vent openings for air and vacuum relief and air release valves as shown in the image, for example, suction screens make an ideal choice. They allow air flow to pass yet keep out debris and small, "adventurous" creatures. You may see these in both rural and urban communities replacing bulky expanded metal ones or more bulky, more costly vents.



In the home, they can also be used, attached to the end of the clothes dryer exhaust line that exits the home when PVC pipe is used instead of vent tubing. This also prevents those small, "adventurous" creatures from getting into places they shouldn't.

Notice the two applications above are not used in a suction application. However, suction screens can be used anytime as an air vent. They have varying mesh sizes for each individual application, therefore being tailor-made to the situation.



Suction Screens in the Commercial and Residential Paint Industry

In the commercial and residential paint industry, suction screens are used in paint containers, or buckets, so when in use, the paint does not "clump" or "chunk" when flowing through to the hose and gun, thereby destroying the job and damaging equipment or surface being painted. An example of a paint sprayer is shown.

Suction Screens in the Disaster Relief Industry

Suction screens are used in the disaster relief market. In the aftermath of disaster occurrences, responders must remove water from flooded areas. Upon using suction hoses and pipes to remove the unwanted water, a suction screen is threaded onto the end of the hose or pipe so foreign objects and debris do not clog the line, thereby allowing the water to free-flow out of the flooded area. Suction screens are normally on the Disaster Response Equipment Checklist. Used in combination with water pumps and something that can be as simple as a garden hose, suction screens can be a critical use item.

Manufactured by Ohio Fabricators Company, here in the United States, suction screens are available with varying pipe sizes up to 3" npt, and mesh sizes from 4 – 200 mesh. Glass reinforced nylon connector ends with male or female npt threads and epoxy bonded stainless steel wire mesh are usually on the shelf. Click on the link to learn more about our Model "IS" suction screens.

[OFCO Pipe Mounted Suction Screens](#)

Building and Home Maintenance Industry

Building and Home Maintenance is a market for suction screens. In various floor and carpet cleaning tank mounts, suction strainers and suction screens are used. Cleaning, restoration, remediation, and disaster recovery can get costly if floors and carpets are not maintained properly or damaged. Water in tank mounts that cleans floors and carpets must be filtered and cleaned. That is where suction strainers and suction screens are used. They are also used as an air filter, too, in some tank mounted units.

CLEANING HINT! This applies to removing lint from filters and strainers. Lint can get caught between the wire cloth strands and be difficult to remove. After the filter or strainer has been cleaned and rinsed, set it to dry. To remove the lint from the cleaned filter or strainer, burn it off with a lighter or small torch. Hold it up to the lint and it will merely dissipate. It is that simple. This hint does not come without warning though. When using fire, consider practicing safety.



Chemical Processing Industry

Suction screens are used in the chemical processing industry. When non-caustic fluids are pushed through an inlet line to process equipment for testing, most times there is a small strainer attached to the inlet line. This catches the larger contaminants flowing from the drum, reservoir, or other larger receptacle and prevents them from flowing down stream. The suction screen acts as a pre-filter in cases before fine filtration takes place.

Fluid Power/Hydraulics Industry

Because of the small physical size of the screen with increased filtering area, they are the strainer of choice in a lot of system and equipment applications. Space limitations inside a reservoir favor suction screen use. Factories and manufacturing plants, also at times, when a leakage occurs and puddles of hydraulic oil form on the floor, suction screens threaded onto the suction pipe will be an aid in removing the oil from the floor.



Suction screens are often used as a vent cover on metal cabinets to allow air circulation to dissipate heat. When the cabinets are located outside buildings in the environment suction screens also act to not only allow air circulation but also to prevent insects and bugs from entering and nesting inside the cabinet.

There are many areas with few limits for the use of installing suction screens. They can be used in applications for either fluid suction or air. When it comes to transferring liquids from one area to another where straining is required, suction screens can be the first strainer selection. Be mindful of having the screen area that will be adequate for usage considering viscosity and flow rate. If any questions arise, please feel free to contact OFCO anytime. We are always ready to help.

NOTE: For larger applications, a diffuser can be threaded onto larger pipes or hoses for faster water removal. OFCO also manufactures diffusers and you can review them at the following link.

[OFCO Flow Diffusers](#)