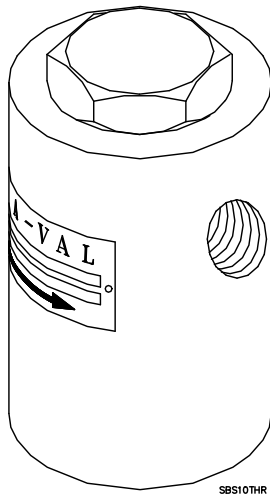


# STRA VALVES STRAINERS VAL



## APPLICATIONS:

This basket strainer is a simplex type (single basket) which is installed in a piping system to protect critical piping components downstream. It is used for particle separation from down to several microns and up to particle size up to a 1/4" depending on the pipe size. This type of strainer requires shutoff or isolation valves both upstream and downstream when the strainer is cleaned. When two strainers are piped in parallel with isolation valves in such a manner as to keep one unit in operation while the other is being cleaned, this is referred to as a duplex version, and should be used where the flow cannot be shut down during the cleaning process.

## PRINCIPLE OF OPERATION

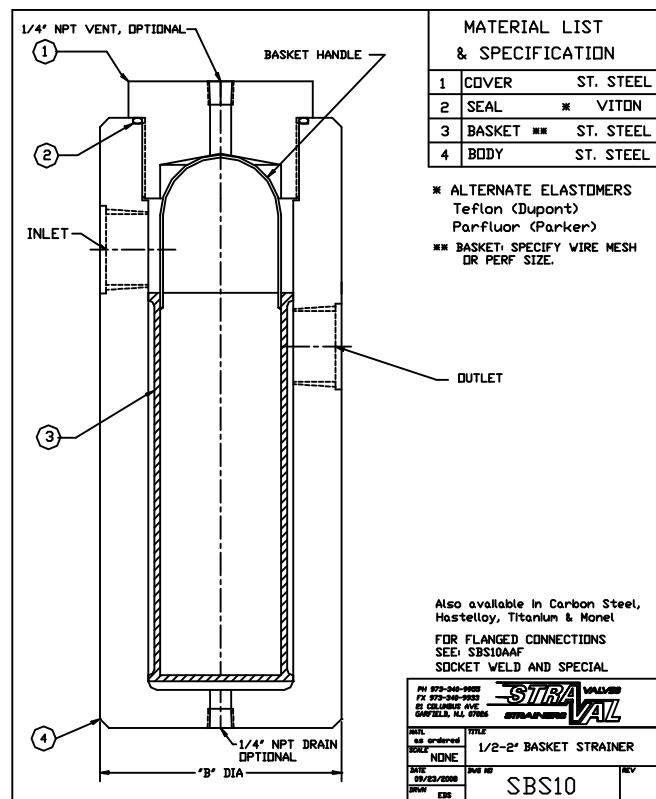
The operation is simple as there are no moving parts. The only concern is to make sure the strainer is properly sized for flow and pressure rating and that the inlet and outlet ports are properly piped up to match the piping flow. The proper orientation is for flow to enter into the basket from the port marked "inlet" and flowing peripherally outward to the port marked "outlet". There is usually a very minimal pressure drop across the strainer when the basket is not clogged with particles. The more degree of clogging and particle buildup and the more the pressure drop across the strainer. If the basket (3) is completely full, there is a possibility the basket may burst if it is not designed to withstand the full inlet pressure of the strainer. This is a particular concern when the strainer is a high pressure unit. Therefore it is advisable to install a differential

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pressure gauge or gauge monitor to record when the pressure drop across the strainer exceeds the recommended design value of the strainer basket. When the pressure drop starts building up, there will be usually a corresponding reduction in flow depending on the type of pump that is installed in the system. So maintaining a clean basket is extremely important in protecting any downstream equipment as well as maintaining proper flow through the sipping system.

## BASKET REMOVAL AND CLEANING

Before, attempting to remove the basket, you must be certain there is no pressure within the strainer and that the unit is sufficiently cooled off so the strainer is safe to handle. If there are no isolation valves to the strainer, the entire piping branch where the strainer is located would have to be drained. If there are isolation valves, these would make it easier to cut off the pressure source to the strainer and prevent a flood and possible injury when removing the top strainer plug. If the strainer is ordered with vent plug on top of the strainer plug, or a drain located at the bottom of the body, use these to remove any residual pressure within the strainer body. Once it is determined there is no pressure in the strainer body, then it is safe to unscrew the top body plug (1) and to lift out the strainer basket (3). The basket then needs to be cleaned and emptied. Please be



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sure to use protective clothing when hazardous or hot fluids or gases. Be careful not to damage the very fine wire mesh that may exist with some baskets. Baskets without mesh and are of the Perf type, can take more rugged abuse when being cleaned. If the basket is equipped with a seal located at the top flanged of the basket, that needs to be checked if it is damaged. If it is, it must be replaced. This seal is supplied only with very fine mesh baskets and prevents particles from bypassing the strainer basket. The only other seal that needs to be checked is the top plug seal (2) that seals the top plug to the body. Replace if worn, swollen or otherwise chemically attacked or damaged.

## **MAINTENANCE & REPAIR**

The only maintenance required is to make sure the basket does not get over-clogged and that it be frequently cleaned. This must be monitored with excessive pressure drops as discussed above. It is also recommended to keep the thread mating the plug (1) to the body (4) always lubricated and clean at all times, so the plug can be easily removed when needed. Check for corrosion and other damage. Replace the entire strainer if these threads are worn or damaged as the strainer may then be unsafe to use.

For critical applications where downtime cannot be tolerated, it is always advisable to have a spare basket and a spare seal on hand. It is best to order these at the same time when the strainer is on order at the factory.