HAYWARD FLOW CONTROL
PVC, CPVC, & GFPP SB SERIES SIMPLEX BASKET STRAINER
INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

PLEASE READ THE FOLLOWING INFORMATION PRIOR TO INSTALLING AND USING ANY HAYWARD PRODUCT. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY, OR EVEN DEATH.

1. Hayward Flow Control (Hayward), a division of Hayward Industries, guarantees its products against defective material and workmanship only. Hayward assumes no responsibility for property damage or personal injury resulting from improper installation, misapplication, or abuse of any product.
2. Hayward assumes no responsibility for property damage or personal injury resulting from chemical incompatibility between its products and the process fluids to which they are exposed. Determining whether a particular PVC, CPVC, or GFPP product is suitable for an application is the responsibility of the user. Chemical compatibility charts provided in Hayward literature are based on ambient temperatures of 70°F and are for reference only.
3. Hayward products are designed for use with non-compressible liquids.

WARNING

Hayward PVC, CPVC, or GFPP products should NEVER be used or tested with compressible fluids such as compressed air or nitrogen. Use of PVC, CPVC, or GFPP products in compressible fluid applications may result in product damage, property damage, personal injury, or even death.

4. The maximum recommended fluid velocity through this Hayward product is five feet per second (5 ft/s). Higher fluid velocity can result in damage due to the water hammer effect.
5. Piping systems must be designed and supported to prevent excess mechanical loading on Hayward products due to system misalignment, weight, shock, vibration, and the effects of thermal expansion and contraction.
6. The effect of temperature on plastic piping systems must be considered when the systems are initially designed. The pressure rating of plastic systems must be reduced with increasing temperature. Maximum operating pressure is dependent upon material selection as well as operating temperature. Before installing any Hayward product, consult Hayward product literature for pressure vs. temperature curves to determine any operating pressure or temperature limitations.
7. PVC, CPVC, and GFPP plastic products become less ductile below 34°F. Use caution in their installation and operation below this temperature.

WARNING

Hayward PVC and CPVC products should not be used in services with operating temperature below 34°F. Hayward GFPP products should not be used in services with operating temperature below 20°F.

8. Due to differential thermal expansion rates between metal and plastic, transmittal of pipe vibration and pipe loading forces, **DIRECT INSTALLATION OF HAYWARD FLOW CONTROL PRODUCTS INTO METAL PIPING SYSTEMS IS NOT RECOMMENDED**. Wherever installation of Hayward product into metal piping systems is necessary, it is recommended that at least 10 pipe diameters in length of plastic pipe be installed upstream and downstream of the product to compensate for the factors mentioned above.
9. Published operating requirements are based on testing of new products using clean water at 70°F. Performance is affected by many factors including fluid chemistry, viscosity, specific gravity, flow rate, and temperature. These should be considered when sizing Hayward products.
10. Systems should always be depressurized and drained prior to installing or maintaining any Hayward product.

WARNING

Failure to depressurize and drain system prior to installing or maintaining any Hayward product may result in product damage, property damage, personal injury, or even death.

11. Always follow your site and/or company procedures for any safety training and/or site specific precautions or warnings in addition to those in this document.

The most recent revision to this document is available at http://www.haywardflowcontrol.com/images/flowcontrol/PDF/iom/SBIOM.pdf

1. INSTALLATION:

1.1. Transporting the Basket Strainer:

Product should be stored inside factory packaging until product is ready to be installed. Packaged product should be stored indoors, at room temperature, and out of direct sunlight. Avoid storing packaged product in location where packaging may become wet. Product should be moved as close to installation site as possible prior to removing from packaging. Do not cut through tape on box any more than necessary to avoid damaging product. After removing product from carton, care must be taken not to damage product or to allow debris to enter product.

1.2. Mounting the Strainer to Floor or Skid:

Hayward SB-Series Basket Strainers are equipped with a slotted bolt pattern on the base so that the vessel may be directly mounted to a skid or to the floor. Hayward recommends using 3/8" diameter bolts or studs with flat washers and lock washers for mounting the vessel. The bolts (or studs) should be torqued to 5 ft-lb in an alternating sequence in order to securely mount the vessel without damaging the base and to ensure that the vessel is installed as level as possible.

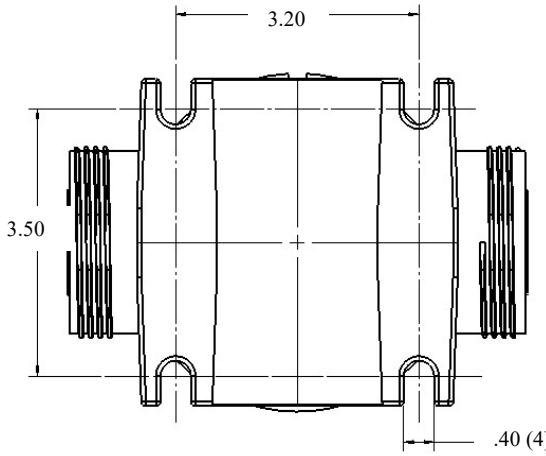

Fig. 1: SB-Series base mounting pad (bottom view) – ½" thru 1".

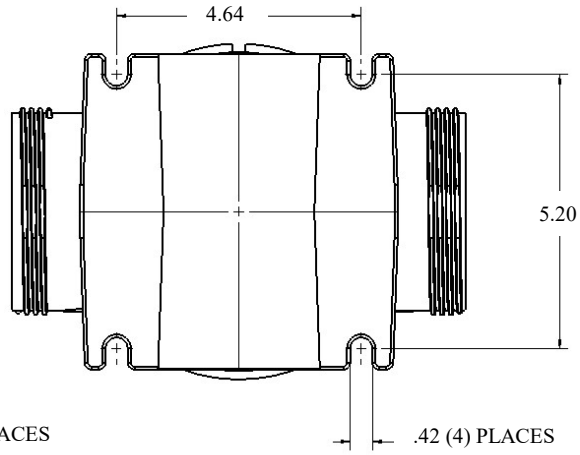

Fig. 2: SB-Series base mounting pad (bottom view) – 1-1/4" thru 2".

WARNING

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The PVC, CPVC, or GFPP SB Series Strainer is intended for use in liquid service only. Do not attempt to use this product for controlling air or gases. Use of this product in air or gas service may result in product damage, property damage, personal injury, or even death.

1.3. Installing the Strainer into a System:

CAUTION

Hayward SB-Series Basket Strainer must be installed in an upright position.

Do not install unsupported piping or risers onto end connectors or vessel body.

Do not use vessel as a pipe support or system anchor. Sound piping system design principles should be applied when installing this vessel.

Do not install metal pipe directly into end connectors or vessel body (see pg. 1).

Use of expansion joints or expansion loops in piping system connected to vessel may be necessary to keep differential thermal expansion / contraction stresses to a minimum.

It is highly recommended that valves are installed upstream and downstream of vessel to allow for routine maintenance (i.e. basket changes / cleanout).

1.3.1. **Installing the Basket Strainer into a System:**

1.3.1.1. Remove product from packaging.

1.3.1.2. Verify that product is defect free and meets specifications.

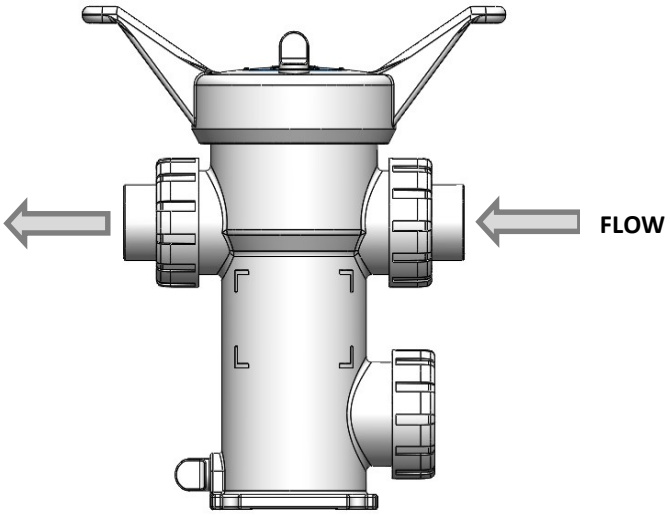

Fig. 3: Straight Flow Connection

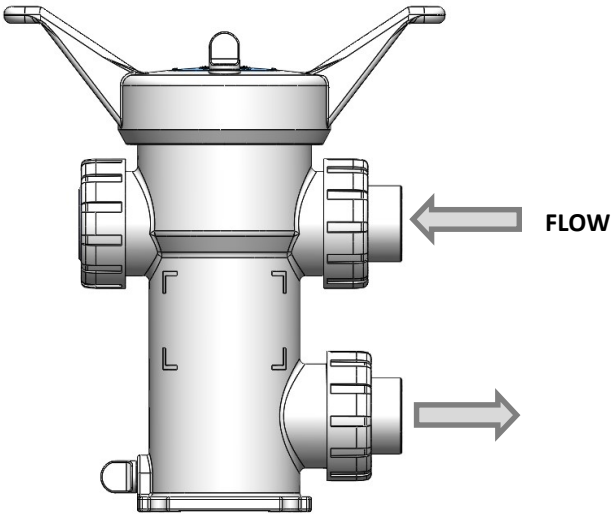

Fig. 4: Loop Flow Connection

1.3.1.3. Remove the nuts and end connectors from strainer body by rotating the nuts counter clockwise. Verify end connector o-rings are installed in their respective grooves.

1.3.1.4. Place nut over pipe end so that it can engage the end connector once the end connector is connected to the pipe end.

1.3.1.4.1. Threaded End Connectors:

1.3.1.4.1.1. Wrap male threads of pipe end with PTFE tape. Proper application of PTFE tape will provide a sufficient seal for threaded joints.

WARNING

Do not use "pipe dope", liquid sealant, or thread sealant on any PVC, CPVC, or GFPP threaded connections. Pipe dope and thread sealants may react with the PVC, CPVC, or GFPP, weakening the material and potentially resulting in failure of the joint, product damage, property damage, personal injury, or even death.

1.3.1.4.1.2. Thread the end connector onto the threaded pipe end until "hand tight". Using a strap wrench only (never use a pipe wrench), tighten the end connector onto the pipe only to the point required to form a seal between the end connector and pipe thread; 1/2 turn past hand tight is typically sufficient to form a seal. **(Caution: Tightening beyond this point may introduce excessive stress that could cause failure of the end connector or the threaded end of the pipe.)**

1.3.1.4.2. Solvent-Weld End Connectors (PVC and CPVC only):

CAUTION

Strainer body must be disassembled from nuts and end connectors prior to solvent cementing end connections into system, Avoid exposing strainer body and end connector o-rings to primer, solvent cement, or their fumes, as damage to the strainer could result.

1.3.1.4.2.1. Refer to solvent-cement manufacturer's instructions and cure times.

1.3.1.4.2.2. **Do not install strainer body until solvent cement has fully cured.** Reinstall end connectors by threading nuts onto body by rotating in a clockwise direction.

1.3.1.4.3. Flange Connections:

1.3.1.4.3.1. NOTE: When provided with flanges, PVC, CPVC, or GFPP SB Series Strainers are provided with an end connection sub-assembly, consisting of an end connector, connected to a flange, with an assembly nut for connection to the strainer body.

1.3.1.4.3.2. Flange bolts should be tight enough to compress the gasket and make a good seal, without distorting or putting excessive stress on the flanges. Suitable washers should be used between the bolt head and flange and the nut and flange. Bolts should be tightened in alternating sequence (Figure 1). See Table 1 for recommended torque.

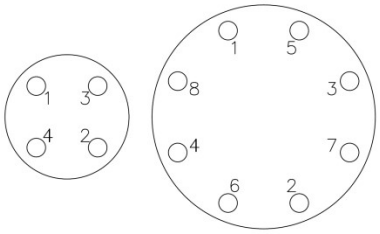

Fig. 5: Bolt Tightening Sequence

Flange Size	Bolt Dia. (in.)	Torque (ft. lbs.)
½"	1/2	10 – 15
¾"	1/2	10 – 15
1"	1/2	10 – 15
1-¼"	1/2	10 – 15
1-½"	1/2	10 – 15
2"	5/8	15 – 20
2-1/2"	5/8	20 – 25
3"	5/8	20 – 25
4"	5/8	20 – 25

Table 1. Recommended Flange Bolt Torque

1.3.1.5 Once end connectors are installed in piping system, thread the true union nuts onto the inlet and outlet of the strainer body.

2. OPERATION

2.1 Installing the Basket:

2.1.1 To install the basket into the SB Series Basket Strainer, place basket inside vessel aligning shoulder of basket with shoulder of vessel body.

2.2 Filling and Pressurizing the Basket Strainer

2.2.1 To fill and pressurize Hayward SB-Series Basket Strainer:

2.2.1.1 Verify that cover o-ring, cover o-ring groove, and cover sealing surface are clean.

2.2.1.2 Verify that cover o-ring is seated inside o-ring groove.

2.2.1.3 Open vent via the thumbscrew on top of cover (vent is opened by rotating the thumbscrew counter-clockwise). NOTE: Process media will be allowed to escape through outlet of vent as vessel is filled. Prepare to capture, collect, and dispose of vented chemicals properly.

2.2.1.4 Install cover firmly onto vessel body

2.2.1.5 Do not strike cover.

2.2.1.6 Do not attempt to over-tighten cover.

2.2.1.7 Cover is sealed by means of a pressure energized face sealing o-ring. **Tighten cover hand-tight plus approximately 1/8-turn (i.e. 45°). It is not necessary to tighten cover beyond hand tight plus 1/8-turn.**

2.2.1.8 Slowly open valve upstream of vessel and start system pump (if necessary).

2.2.1.9 Allow process media to fill vessel, air will be purged through vent on top of cover. After all air has been purged, process media will start flowing through vent . Close vent by rotating the thumbscrew clockwise.

2.2.1.10 Allow pressure to slowly increase until system operating pressure is reached.

WARNING

Open and close valves upstream and downstream of the SB-Series Basket Strainer slowly. Rapid increases in pressure or flow can create excess water hammer effect, resulting in property damage, personal injury, or even death.

2.2.1.11 Carefully inspect vessel at cover, end connectors, end caps, and vent to verify no leaks are present. If any leaks are present, shut down system, relieve system pressure, and drain vessel prior to tightening any connections.

WARNING

If vessel is leaking, never try to stop the leak while vessel is under pressure. Doing so can result in property damage, personal injury, or even death.

WARNING

Failure to fill vessel with vent thumbscrew loosened to allow air to escape from the vessel can result in buildup of pressure and compression of air in the system, resulting in property damage, personal injury, or even death.

2.3 Operating the Basket Strainer:

2.3.1 Valves upstream and downstream of the vessel should be opened and closed slowly to prevent water hammer on the vessel.

2.3.2 The maximum recommended fluid velocity through the SB Series Basket Strainer is 5 ft/s.

2.3.3 Hayward recommends the installation and use, or monitoring, of gauges upstream and downstream of each vessel in order to monitor the increase in differential pressure that will occur as the basket becomes fouled.

2.3.4 Shut down system, remove and clean, or replace basket when differential pressure reaches 5 psi.

2.4 Depressurizing and Draining the Vessel:

Systems should always be depressurized and drained prior to installing or maintaining any Hayward product.

WARNING

Failure to depressurize and drain system prior to installing or maintaining filter vessel may result in product damage, property damage, personal injury, or even death.

2.4.1 To depressurize and drain Hayward SB-Series Basket Strainer:

2.4.1.1 Slowly close valves upstream and downstream of basket strainer any Hayward product.

WARNING

Open and close valves upstream and downstream of the SB Series Basket Strainer slowly. Rapid increases in pressure of flow can create excess water hammer effect, resulting in property damage, personal injury, or even death.

2.4.1.2 Slowly open vent on top of cover (vent is opened by rotating thumbscrew counter-clockwise). NOTE: Process media will be allowed to escape vent as vessel depressurizes. Prepare to capture, collect, and dispose of vented chemicals properly.

2.4.1.3 After all pressure has been relieved, remove plug from drain port at bottom of strainer body and allow vessel to drain completely. Capture and dispose of drained chemicals properly.

2.4.1.4 For faster draining, the nut of the lower end cap port can be loosened to allow drainage from this port. Alternatively, a Hayward TB-Series ball valve can be installed to drain the vessel via this lower port. **Caution:** Do not lose o-ring that seals port cap to strainer body.

2.5 Removing, Replacing, or Cleaning the Strainer Basket:

2.5.1 To remove and replace strainer basket from Hayward SB-Series Basket Strainer:

2.5.1.1 Depressurize and drain basket strainer. (See “Depressurizing and Draining the Vessel” above.)

2.5.1.2 Remove cover from basket strainer and place in a clean location. Inspect cover threads and o-ring for damage or debris. Replace if needed.

2.5.1.3 Grasp the handle of the basket and lift the basket out of the strainer body.

2.5.1.4 Allow any fluid to drain from the basket as it is lifted out of the body.

2.5.1.5 Remove any collected debris from the basket by turning the basket over and emptying the contents into an appropriate container for disposal. If particles are trapped in the perforations of the basket, wash basket with water and/or use a wire brush to gently remove debris. Do not dislodge collected material from basket by striking the

basket or striking the basket against another object, as this may damage the basket.

2.5.2 Replacing the basket:

2.5.1.6 Once the basket is cleaned of collected debris, install the basket into the strainer body as described in section 2.1.

3. VESSEL MAINTENANCE:

3.1 Clean internal cover threads and external body threads each time cover is removed. Threads should be cleaned with a soft brush or cloth. Care should be taken not to damage threads. If cover or nut threads are damaged due to normal "wear and tear", replace damaged cover or nuts. If body threads are damaged, replace entire basket strainer.

WARNING

Basket Strainer should never be pressurized with damaged threads on cover, body, or assembly nuts. Use of basket strainer with damaged threads could result in property damage, personal injury, or even death.

WARNING

If nuts or cover ever fail due to over pressurization or water-hammer failure, entire unit needs to be replaced. Failure to replace unit after water-hammer failure, or failure due to over pressurization could result in property damage, personal injury, or even death.

3.2 Clean and inspect o-ring grooves and o-rings each time the cover or end connector is removed. Damaged o-rings should be replaced immediately.

4. TROUBLESHOOTING:

Problem	Cause	Solution
Leak between cover and body	Damaged o-ring	Remove cover and carefully inspect o-ring for cuts, impressions, or other damage. Replace o-ring if damaged.
	Debris in o-ring groove	Remove cover and o-ring. Clean o-ring groove using care not to scratch sealing surface.
	Loose cover / Over-tightened cover	Tighten cover hand tight plus 1/8-turn (45º). Cover should not require tightening beyond this point. Never strike cover. Never use "cheater" bar to tighten or loosen cover.
	Missing o-ring	Remove cover, clean groove, and install new o-ring.
Leak between end connector and body	Damaged o-ring	Remove assembly nut and end connector. Carefully inspect o-ring for cuts, impressions, or other damage. Replace o- ring if damaged.
	Loose assembly nut	Tighten assembly nut hand tight. Using strap wrench, gently tighten assembly nut an additional ¼-turn (90º).
	Missing o-ring	Remove assembly nut and end connector. Clean o-ring groove and install new o-ring.
Increase in pressure drop	Fouled basket	Clean or replace fouled basket with new basket. Never allow differential pressure across vessel to exceed 5 psid.
Reduction in flow through unit	Fouled basket	Clean or replace fouled basket with new basket. Never allow differential pressure across vessel to exceed 5 psid.

5. PRODUCT SPECIFICATIONS:

Maximum Pressure: 150 psi @ 70ºF (see Chart 1 for operating pressures at elevated temperatures)

Maximum Differential Pressure: 5 psid (See Section 2.3)

Max Temperature:
GFPP: 240ºF (see Chart 1)
CPVC*: 190ºF (see Chart 1)
PVC*: 140ºF (see Chart 1)

Maximum Flow Velocity: 5 ft/s (1.5 m/s) for Simplex Basket Strainer

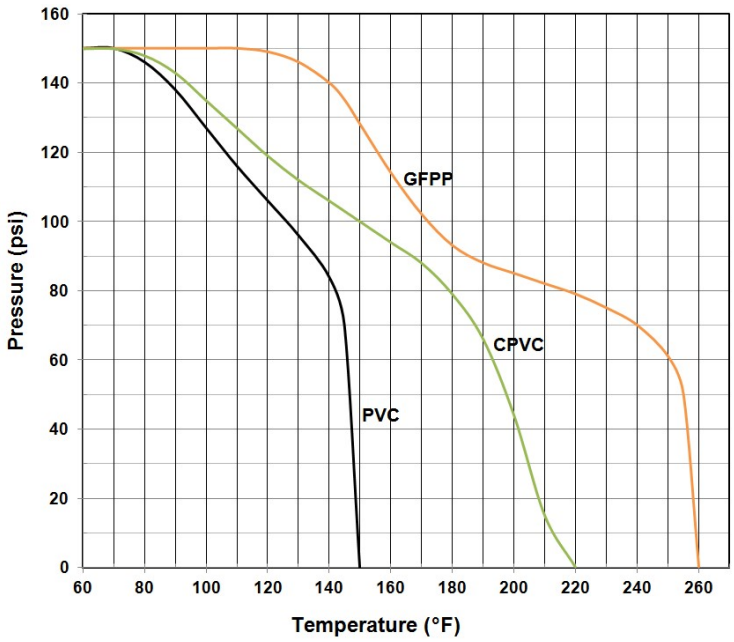

Chart 1: Operating Pressures of PVC, CPVC, and GFPP Materials at Elevated Temperatures.

CAUTION

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NOTES:

Krytox™ is a trademark of The Chemours Company

A full manual is available by visiting the website below.

http://www.haywardflowcontrol.com/images/flowcontrol/PDF/iom/SBIOM.pdf

6. **PARTS LIST:**

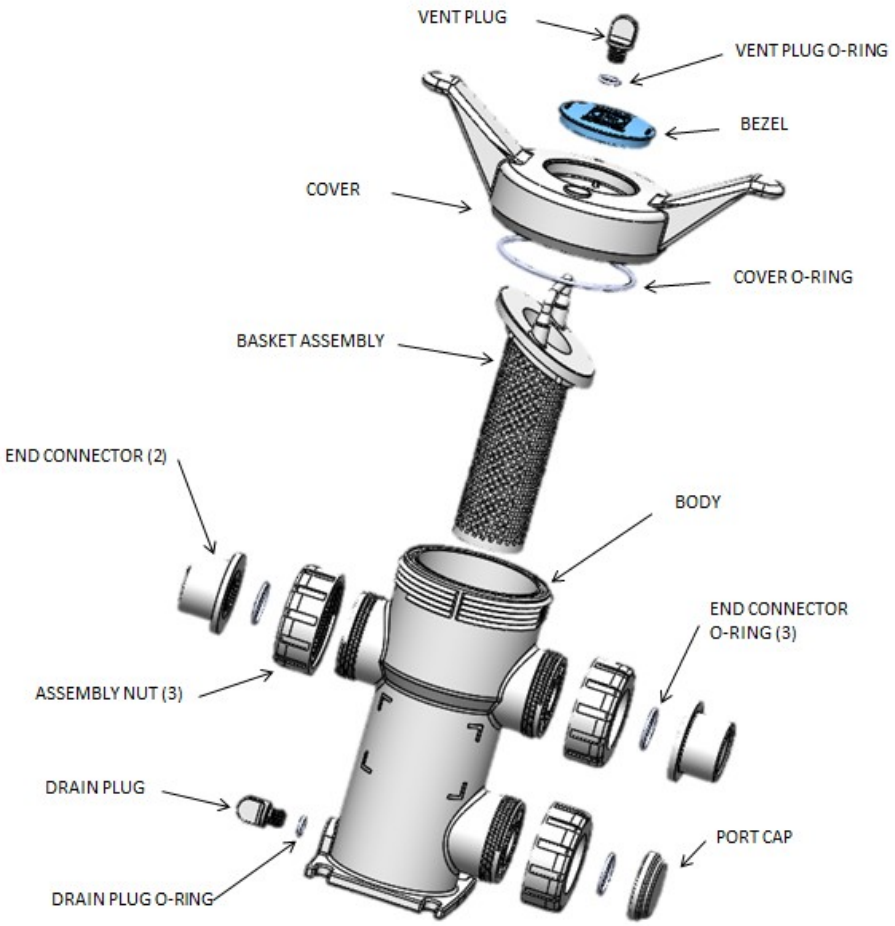

Fig. 6: Exploded View of PVC, CPVC, and GFPP SB Series Strainer Basket Assembly.

7. WARRANTY TERMS AND CONDITIONS:

THREE YEAR WARRANTY: All products manufactured by Hayward are warranted against defects in material or workmanship for a period of three years from date of shipment. Our sole obligation under this warranty is to repair or replace, at our option, any product or any part or parts thereof found to be defective. HAYWARD MAKES NO OTHER REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The warranty set forth above is the only warranty applicable to Hayward products and in no event shall Hayward be liable for any delay, work stoppage, cartage, shipping, loss of use of equipment, loss of time, inconvenience, loss of profits of any direct or indirect incidental resulting from or attributable to a breach of warranty. The remedies under this warranty shall be the only remedies available. OUR MAXIMUM LIABILITY SHALL NOT IN ANY EVENT EXCEED THE CONTRACT PRICE FOR THE PRODUCT.

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3. Hayward products are designed for use with non-compressible liquids.

WARNING

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WARNING

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10. Systems should always be depressurized and drained prior to installing or maintaining any Hayward product.

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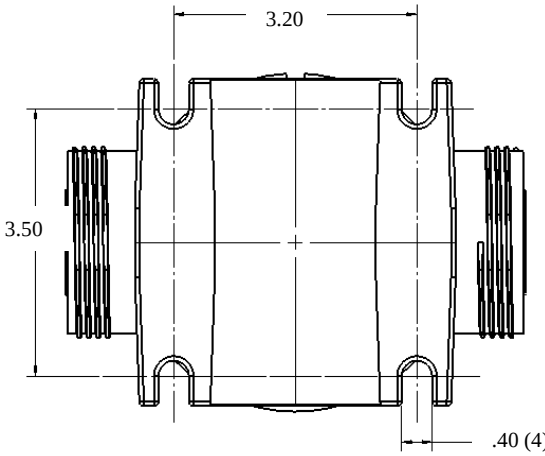

Fig. 1: SB-Series base mounting pad (bottom view) – ½" thru 1".

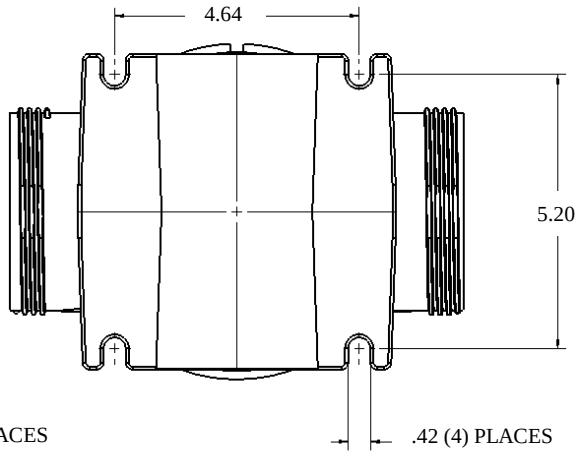

Fig. 2: SB-Series base mounting pad (bottom view) – 1-1/4" thru 2".

WARNING

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1.3. Installing the Strainer into a System:

CAUTION

Hayward SB-Series Basket Strainer must be installed in an upright position.

Do not install unsupported piping or risers onto end connectors or vessel body.

Do not use vessel as a pipe support or system anchor. Sound piping system design principles should be applied when installing this vessel.

Do not install metal pipe directly into end connectors or vessel body (see pg. 1).

Use of expansion joints or expansion loops in piping system connected to vessel may be necessary to keep differential thermal expansion / contraction stresses to a minimum.

It is highly recommended that valves are installed upstream and downstream of vessel to allow for routine maintenance (i.e. basket changes / cleanout).

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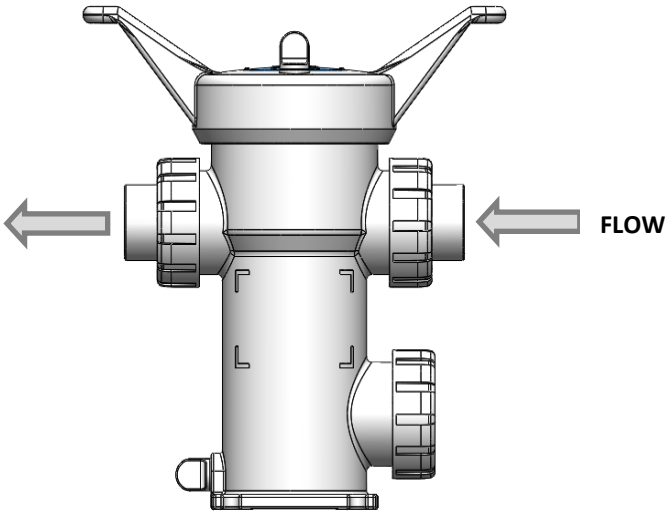

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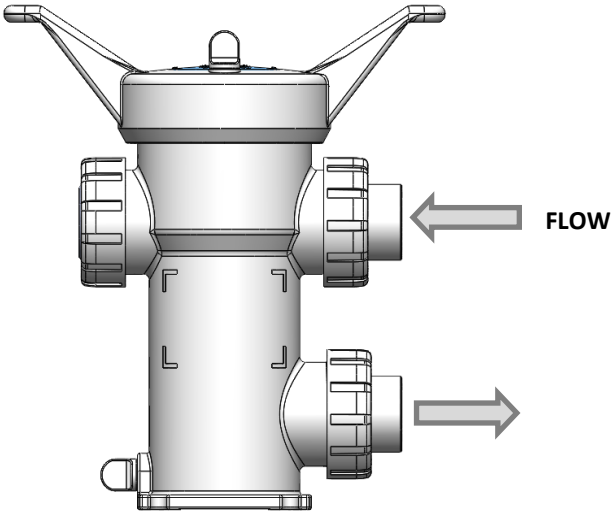

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1.3.1.4.1.1. Wrap male threads of pipe end with PTFE tape. Proper application of PTFE tape will provide a sufficient seal for threaded joints.

WARNING

Do not use "pipe dope", liquid sealant, or thread sealant on any PVDF threaded connections. Pipe dope and thread sealants may react with the PVDF, weakening the material and potentially resulting in failure of the joint, product damage, property damage, personal injury, or even death.

1.3.1.4.1.2. Thread the end connector onto the threaded pipe end until "hand tight". Using a strap wrench only (never use a pipe wrench), tighten the end connector onto the pipe only to the point required to form a seal between the end connector and pipe thread; 1/2 turn past hand tight is typically sufficient to form a seal. **(Caution: Tightening beyond this point may introduce excessive stress that could cause failure of the end connector or the threaded end of the pipe.)**

1.3.1.4.2. Fusion-Weld End Connectors (PVDF Only):

WARNING

Strainer body must be disassembled from nuts and end connectors prior to socket fusing connections into system. Avoid exposing strainer body and end connector o-rings to heated air or fumes during fusion process, as damage to the product could result.

1.3.1.4.2.1. Refer to pipe supplier's procedure or your internal fusion procedure.

1.3.1.4.2.2. **Do not install strainer basket until fusion joint has cooled.** Reinstall end connectors by threading nuts onto body by rotating in a clockwise direction.

1.3.1.4.3. Flange Connections:

1.3.1.4.3.1. NOTE: When provided with flanges, PVDF SB Series Strainers are provided with an end connection sub-assembly, consisting of an end connector, connected to a flange, with an assembly nut for connection to the strainer body.

1.3.1.4.3.2. Flange bolts should be tight enough to compress the gasket and make a good seal, without distorting or putting excessive stress on the flanges. Suitable washers should be used between the bolt head and flange and the nut and flange. Bolts should be tightened in alternating sequence (Figure 1). See Table 1 for recommended torque.

Fig. 5: Bolt Tightening Sequence

Flange Size	Bolt Dia. (in.)	Torque (ft. lbs.)
1"	**½**	**10 – 15**
1-½"	**½**	**10 – 15**
2"	**⅝**	**15 – 20**

Table 1. Recommended Flange Bolt Torque

1.3.1.5 Once end connectors are installed in piping system, thread the true union nuts onto the inlet and outlet parts of the strainer body.

2. OPERATION

2.1 Installing the Basket:

2.1.1 To install the basket into the SB Series Basket Strainer, place basket inside vessel aligning shoulder of basket with shoulder of vessel body.

2.2 Filling and Pressurizing the Basket Strainer

2.2.1 To fill and pressurize Hayward SB-Series Basket Strainer:

2.2.1.1 Verify that cover o-ring, cover o-ring groove, and cover sealing surface are clean.

2.2.1.2 Verify that cover o-ring is seated inside o-ring groove.

2.2.1.3 Open vent via the thumbscrew on top of cover (vent is opened by rotating the thumbscrew counter-clockwise). NOTE: Process media will be allowed to escape through outlet of vent as vessel is filled. Prepare to capture, collect, and dispose of vented chemicals properly.

2.2.1.4 Install cover firmly onto vessel body

2.2.1.5 Do not strike cover.

2.2.1.6 Do not attempt to over-tighten cover.

2.2.1.7 Cover is sealed by means of a pressure energized face sealing o-ring. **Tighten cover hand-tight plus approximately 1/8-turn (i.e. 45°). It is not necessary to tighten cover beyond hand tight plus 1/8-turn.**

2.2.1.8 Slowly open valve upstream of vessel and start system pump (if necessary).

2.2.1.9 Allow process media to fill vessel, air will be purged through vent on top of cover. After all air has been purged, process media will start flowing through vent . Close vent by rotating the thumbscrew clockwise.

2.2.1.10 Allow pressure to slowly increase until system operating pressure is reached.

WARNING

Open and close valves upstream and downstream of the SB-Series Basket Strainer slowly. Rapid increases in pressure or flow can create excess water hammer effect, resulting in property damage, personal injury, or even death.

2.2.1.11 Carefully inspect vessel at cover, end connectors, end caps, and vent to verify no leaks are present. If any leaks are present, shut down system, relieve system pressure, and drain vessel prior to tightening any connections.

WARNING

If vessel is leaking, never try to stop the leak while vessel is under pressure. Doing so can result in property damage, personal injury, or even death.

WARNING

Failure to fill vessel with vent thumbscrew loosened to allow air to escape from the vessel installed can result in buildup of pressure and compression of air in the system, resulting in property damage, personal injury, or even death.

2.3 Operating the Basket Strainer:

2.3.1 Valves upstream and downstream of the vessel should be opened and closed slowly to prevent water hammer on the vessel.

2.3.2 The maximum recommended fluid velocity through the SB Series Basket Strainer is 5 ft/s.

2.3.3 Hayward recommends the installation and use, or monitoring, of gauges upstream and downstream of each vessel in order to monitor the increase in differential pressure that will occur as the basket becomes fouled.

2.3.4 Shut down system, remove and clean, or replace basket when differential pressure reaches 5 psi.

2.4 Depressurizing and Draining the Vessel:

Systems should always be depressurized and drained prior to installing or maintaining any Hayward product.

WARNING

Failure to depressurize and drain system prior to installing or maintaining filter vessel may result in product damage, property damage, personal injury, or even death.

2.4.1 To depressurize and drain Hayward SB-Series Basket Strainer:

2.4.1.1 Slowly close valves upstream and downstream of basket strainer any Hayward product.

WARNING

Open and close valves upstream and downstream of the SB Series Basket Strainer slowly. Rapid increases in pressure of flow can create excess water hammer effect, resulting in property damage, personal injury, or even death.

2.4.1.2 Slowly open vent on top of cover (vent is opened by rotating thumbscrew counter-clockwise). NOTE: Process media will be allowed to escape vent as vessel depressurizes. Prepare to capture, collect, and dispose of vented chemicals properly.

2.4.1.3 After all pressure has been relieved, remove plug from drain port at bottom of strainer body and allow vessel to drain completely. Capture and dispose of drained chemicals properly.

2.4.1.4 For faster draining, the nut of the lower end cap port can be loosened to allow drainage from this port. Alternatively, a Hayward TB-Series ball valve can be installed to drain the vessel via this lower port. **Caution:** Do not lose o-ring that seals port cap to strainer body.

2.5 Removing, Replacing, or Cleaning the Strainer Basket:

2.5.1 To remove and replace strainer basket from Hayward SB-Series Basket Strainer:

2.5.1.1 Depressurize and drain basket strainer. (See “Depressurizing and Draining the Vessel” above.)

2.5.1.2 Remove cover from basket strainer and place in a clean location. Inspect cover threads and o-ring for damage or debris. Replace if needed.

2.5.1.3 Grasp the handle of the basket and lift the basket out of the strainer body.

2.5.1.4 Allow any fluid to drain from the basket as it is lifted out of the body.

2.5.1.5 Remove any collected debris from the basket by turning the basket over and emptying the contents into an appropriate container for disposal. If particles are trapped in the perforations of the basket, wash basket with water and/or use a wire brush to gently remove debris. Do not dislodge collected material from basket by striking the basket or striking the basket against another object, as this may damage the basket.

2.5.2 Replacing the basket:

2.5.1.6 Once the basket is cleaned of collected debris, install the basket into the strainer body as described in section 2.1.

3. **VESSEL MAINTENANCE:**

3.1 Clean internal cover threads and external body threads each time cover is removed. Threads should be cleaned with a soft brush or cloth. Care should be taken not to damage threads. If cover or nut threads are damaged due to normal "wear and tear", replace damaged cover or nuts. If body threads are damaged, replace entire basket strainer.

WARNING

Basket Strainer should never be pressurized with damaged threads on cover, body, or assembly nuts. Use of basket strainer with damaged threads could result in property damage, personal injury, or even death.

WARNING

If nuts or cover ever fail due to over pressurization or water-hammer failure, entire unit needs to be replaced. Failure to replace unit after water-hammer failure, or failure due to over pressurization could result in property damage, personal injury, or even death.

3.2 Clean and inspect o-ring grooves and o-rings each time the cover or end connector is removed. Damaged o-rings should be replaced immediately.

4. **TROUBLESHOOTING:**

Problem	Cause	Solution
Leak between cover and body	Damaged o-ring	Remove cover and carefully inspect o-ring for cuts, impressions, or other damage. Replace o-ring if damaged.
	Debris in o-ring groove	Remove cover and o-ring. Clean o-ring groove using care not to scratch sealing surface.
	Loose cover / Over-tightened cover	Tighten cover hand tight plus 1/8-turn (45º). Cover should not require tightening beyond this point. Never strike cover. Never use "cheater" bar to tighten or loosen cover.
	Missing o-ring	Remove cover, clean groove, and install new o-ring.
Leak between end connector and body	Damaged o-ring	Remove assembly nut and end connector. Carefully inspect o-ring for cuts, impressions, or other damage. Replace o- ring if damaged.
	Loose assembly nut	Tighten assembly nut hand tight. Using strap wrench, gently tighten assembly nut an additional ¼-turn (90º).
	Missing o-ring	Remove assembly nut and end connector. Clean o-ring groove and install new o-ring.
Increase in pressure drop	Fouled basket	Clean or replace fouled basket with new basket. Never allow differential pressure across vessel to exceed 5 psid.
Reduction in flow through unit	Fouled basket	Clean or replace fouled basket with new basket. Never allow differential pressure across vessel to exceed 5 psid.

5. PRODUCT SPECIFICATIONS:

Maximum Pressure: 150 psi @ 70ºF (see Chart 1 for operating pressures at elevated temperatures)

Maximum Differential Pressure: 5 psid (See Section 2.3)

Operating Temperature:

- Min operating temperature: 10ºF (-12.2ºC)
- Max operating temperature: 240ºF (115.6ºC)

Maximum Flow Velocity: 5 ft/s (1.5 m/s) for Simplex Basket Strainer

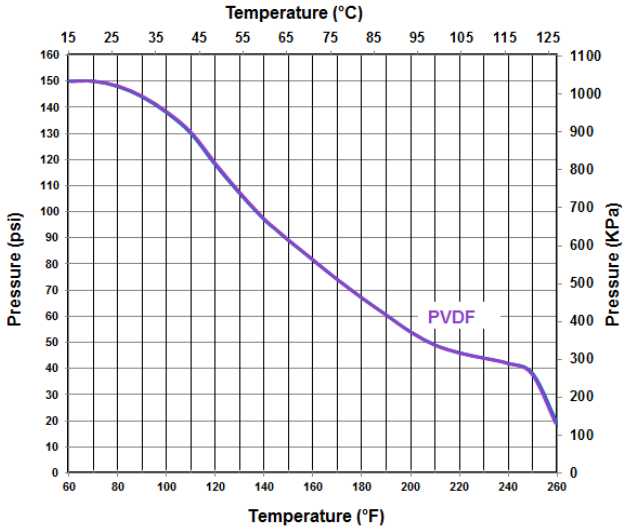

Chart 1: Operating Pressures of PVDF Material at Elevated Temperatures.

CAUTION

Published operating requirements are based on testing of new products using clean water at 70°F. Performance is affected by many factors including fluid chemistry, viscosity, specific gravity, flow rate, and temperature. These should be considered when sizing systems using Hayward products.

NOTES:

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A full manual is available by visiting the website below.

http://www.haywardflowcontrol.com/images/flowcontrol/PDF/iom/SBPVDFIOM.pdf

6. **PARTS LIST:**

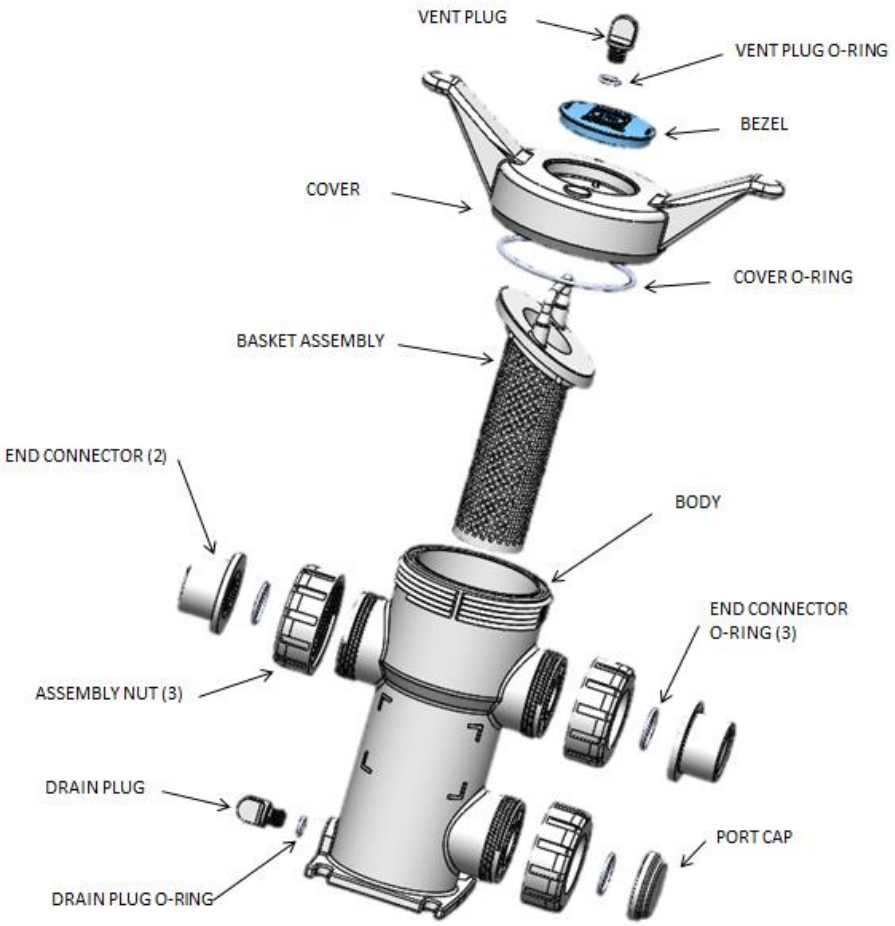

Fig. 6: Exploded View of PVDF SB Series Strainer Basket Assembly.

7. WARRANTY TERMS AND CONDITIONS:

THREE YEAR WARRANTY: All products manufactured by Hayward are warranted against defects in material or workmanship for a period of three years from date of shipment. Our sole obligation under this warranty is to repair or replace, at our option, any product or any part or parts thereof found to be defective. HAYWARD MAKES NO OTHER REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. The warranty set forth above is the only warranty applicable to Hayward products and in no event shall Hayward be liable for any delay, work stoppage, cartage, shipping, loss of use of equipment, loss of time, inconvenience, loss of profits of any direct or indirect incidental resulting from or attributable to a breach of warranty. The remedies under this warranty shall be the only remedies available. OUR MAXIMUM LIABILITY SHALL NOT IN ANY EVENT EXCEED THE CONTRACT PRICE FOR THE PRODUCT.

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- CPVC

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- CPVC
- Clear PVC
- PVDF

Simplex Strainers
- PVC
- CPVC
- GFPP
- PVDF
- Eastar® (Clear)

Duplex Strainers
- PVC
- CPVC
- GFPP
- Eastar® (Clear)

Valves and Flow Control

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- CPVC
- GFPP
- PVDF

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