

# MONARCH ASIA PACIFIC STRAINERS

## Model HPCI Simplex Cast Iron Strainer (ASTM A 126, Class B) - 250 lb. Flanged



### Cast Iron Basket Strainer

#### APPLICATIONS

Steam, water, oil or gas where protection from foreign matter in a pipeline is required.

#### CONSTRUCTION

The HPCI strainers are constructed from rugged cast iron castings and are machined to exacting specifications. These bodies have drilled flanges that are in accordance with ASME B16.1.

#### FEATURES

The HPCI strainer features a basket with an angular cutaway design to allow straight through flow and extremely low pressure loss. All sizes have a bolted top cover flange for ease in basket removal. The gasket is a synthetic fiber and is compressed between the body and cover for maximum strength and durability. HPCI strainers are furnished standard with a tapped and plugged NPT drain connection.

#### BASKETS

Standard baskets are 304 stainless steel and are spot welded for maximum strength. Different size perforations and meshes are available in stainless steel, monel, and brass to meet specific media requirements. If media is not indicated, screens for water will be supplied.

#### CLEANING

Cleaning of the HPCI strainer is accomplished by removing the cover and pulling out the basket. Warning: See Maintenance Instructions on page 3 of for additional precautions and detailed information on servicing the strainer.

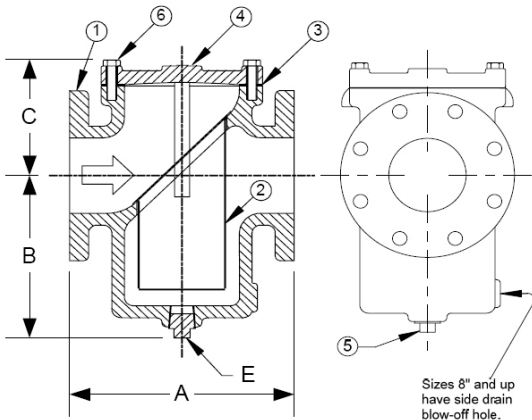
NOM. RATING	MEDIA	2" TO 6"	50 mm to 150 mm
250# R.F.	Steam	250 PSI @ 450°F	1724 KPa @ 232°C
	W.O.G.	500 PSI @ 150°F	3449 KPa @ 66°C

#### US GOVERNMENT/MILITARY SPECIFICATIONS

Style GFV cast iron flanged basket strainers meet or exceed government specification WW-S-2739 (Supersedes MIL-S-16293).

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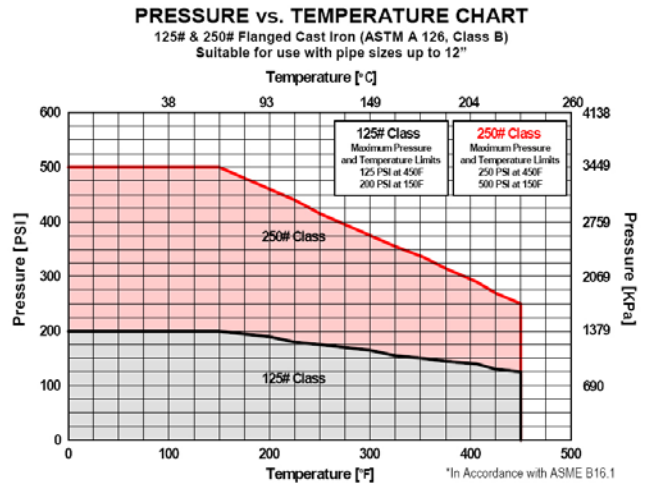
PARTS LIST		
ITEM	DESCRIPTION	MATERIAL
1	Body	Cast Iron (ASTM A 126, Class B)
2	Basket	Stainless Steel 304
3	Gasket	Composition
4	Cover	Cast Iron (ASTM A 126, Class B)
5	Pipe Plug	Malleable Iron
6	Hex Head Lid Screws	Steel

### STANDARD SCREENS SUPPLIED

SIZE		SCREEN GAGE	SCREEN PERFORMANCE					
			FOR STEAM		OPEN AREA	FOR LIQUID		OPEN AREA
in	mm	In	m	In		mm		
2 to 3	50 to 80	28	1/16	1.6	30%	1/8	3.2	43%
4 to 16	100 to 400	24-20	1/8	3.2	43%	1/8	3.2	43%

Standard screens supplied are for liquid service, unless otherwise specified.  
Options: Other perforations, meshes, and screen material are available.

SIZE		A	B	C	E
in	mm	250#	250#	250#	250#
2	50	8-1/2	3-7/8	5-1/4	1/2
2-1/2	65	9-1/4	5-3/4	5-1/4	3/4
3	80	9-1/2	5-3/4	5-1/4	3/4
4	100	11-13/16	8-9/16	6	1
5	125	15-3/8	10-1/2	7-3/4	1
6	150	15-1/2	10-1/2	7-3/4	1
8	200	23-1/4	13-3/4	14	3/4
10	250	27-3/8	17	18	3/4
12	300	31-3/4	20-3/4	21	2
14	350	31-1/2	22-1/4	14	3
16	400	34-5/8	21-3/4	17-1/2	3



WEIGHTS												
SIZE		2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"
250#	lbs	29	53	65	107	187	224	410	748	1285	1230	1730

FLOW COEFFICIENTS												
SIZE	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	
Cv	42.7	77.5	120.2	276.7	442.7	743.1	1486.3	3051.6	4980.6	7984.8	9565.9	

TOTAL SCREEN AREA												
SIZE	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	
(in <sup>2</sup> )	29.27	45.11	78.2	108.44	142.29	176.75	310.03	457.06	691.07	1141.87	1428.51	

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## INSTALLATION AND MAINTENANCE

### GENERAL

A Y-strainer can be installed in either a horizontal or vertical position (Downward flow) with the screen element pointing downward. This allows the strainer screen to collect material in the strainer at the lowest point of the screen. Basket strainers are designed for installation in horizontal lines. They are commonly used for liquid service applications.

### INSTALLATION

Carefully check all machined surfaces to make sure they are free of defects, and the inside of the strainer is free of foreign objects. All strainers should be installed with the arrow on the strainer body pointing in the direction of flow. For installation of threaded strainers an appropriate sealant should be used on the threads. For the installation of flanged strainers the flanged bolting should be tightened gradually going back and forth in a clockwise rotation until all bolts are tight. The system can now be pressurized / gradually while checking for any leakage around all connections. If leakage occurs, depressurize the system and start the installation procedure over.

### MAINTENANCE

#### WARNING

Before the removal or loosening of any bushing, cap, plug or cover on a strainer, extreme caution should be exercised to ensure there is zero pounds pressure in the system. Only after the system has been depressurized, should the strainer be drained for service.

**SERVICE ON A PRESSURIZED STRAINER CAN CAUSE  
SERIOUS INJURY AND/OR PROPERTY DAMAGE.**

A Y-strainer screen can be cleaned by removing the plug in the bushing, cap or bolted cover allowing the strainer to drain the loose material inside the screen. If a blow-off valve is connected to the strainer it can be opened to achieve the same result as the above. The Y-strainer screen can also be cleaned by removing the bushing, cap or cover to access the screen element.

Basket strainers with a closed bottom basket can be cleaned by removing the cap or cover and pulling out the basket screen for service. If the strainer screen is bottomless (Flushing Type) the blow-off plug can be removed allowing it to be drained and cleaned like a Y-strainer.

Care should be taken in cleaning screens. After removing a screen, it should be soaked in a cleaning solution or cleaned by using a brush. Do not allow trapped material in the screen to harden, as it will be difficult to remove. A regular cleaning schedule is recommended to avoid screens from becoming clogged.

A pressure gauge installed before and after a strainer will indicate a pressure loss due to clogging. This can help in establishing a maintenance schedule for cleaning the strainer screen. Extra screens can be useful in keeping the system operating during the cleaning process.