

## Engineering Specification

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# Ball-Plex™ Stainless Steel Flanged Ends Duplex Smart Strainers

792MFH SM, Class 150

794MFH SM, Class 300

796MFH SM, Class 600

2" – 6" (50 – 150 mm)

The 792MFH SM, 794MFH SM, and 796MFH SM Duplex Basket Smart Strainers provide economical protection for costly pumps, meters, valves, and similar mechanical equipment by straining foreign matter from the piping system. Duplex strainers enable system maintenance to be performed without disrupting the flow.

Smart and Connected technology comes standard on the 792MFH SM, 794MFH SM, and 796MFH SM duplex strainers with two pre-installed pressure sensors at the inlet and outlet of the strainer. These sensors monitor the pressure drop that occurs over time when a strainer screen becomes clogged by foreign particles. When the differential pressure across the strainer screen exceeds the pre-configured threshold, an alert is triggered to the customer informing that action is required.

### NOTICE

An add-on Sensor Control Monitor & Connection Kit is required to activate the pressure monitoring capability and collect data from the sensors. Without the connection kit, the sensors are passive components that do not communicate with any other device. The add-on connection kit communicates over wired RS-485 MODBUS or BACnet connection and is compatible with most Building Management and Building Automation Systems. An alternate cellular communication gateway option is available if no BMS is present; however, this option provides alerts only. Data streaming is not available.

### NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.



Model 792MFH SM

### PRESSURE/TEMPERATURE - NON-SHOCK

MODEL	MATERIAL	RATING
792MFH SM	Stainless Steel	232 psi @ 32°F to 248°F 16 bar @ 0°C to 120°C
794MFH SM	Stainless Steel	500 psi @ -20°F to 257°F 35 bar @ -29°C to 125°F
796MFH SM	Stainless Steel	500 psi @ -20°F to 257°F 35 bar @ -29°C to 125°C

Note: Maximum temperature can be limited by gasket and seat material. Consult factory.

### Features

- Ball-Plex™ Duplex Strainers use 3-way ball valves as diverter valves.
- Each ball is made of 316 stainless steel for corrosion resistance, strength, and resistance to the buildup of solids on the surface of the ball.
- PTFE seats provide bubble-tight sealing, superior to metal seats in other designs. This eliminates potentially dangerous leakage into the chamber being cleaned.
- The pressurized chamber in use is covered by the handle. This prevents accidental opening of the pressurized chamber, and allows easy access to the chamber being cleaned.
- Center body casting holds all moving parts. Basket housings are identical and symmetrical around the body.
- After removal of either basket housing, all internal components are easily accessible for service, even with the unit still installed in line.

Mueller Steam Specialty product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Mueller Steam Specialty Technical Service. Mueller Steam Specialty reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Mueller Steam Specialty products previously or subsequently sold.

 **STRAINER**  
Purple Engineering

 **Mueller Steam Specialty™**

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## Available Features with Sensor Control Monitor Installed

- Real-time pressure monitoring
- Visual Display – Pressure and temperature data for each sensor, Screen Pressure differential, Screen fill percentage
- Data streaming if connected to BMS [RS-485 MODBUS or BACnet]
- Full basket alerts
- Cellular Communications Gateway if no BMS present

## Alerts

- Display
- LED
- BMS Alarm
- Cellular Gateway
- RS-485 MODBUS and BACnet



## Typical Service

- Duplex Strainers are designed for use in fluid handling systems where the flow cannot be shut down for basket cleaning.
- Typical services include cooling water, compressors, condensers, fire lines, fuel lines, lubrication systems, salt and fresh water systems, chemical process systems, and pump suction service.
- Consider strainer body and screen material as well as gasket and seat materials for suitability in particular service.

## Baskets

Large Open Area Ratios ensure minimum pressure drop across the unit.

Refer to Pressure Drop Charts in the Technical Data section of the Mueller Steam Specialty Engineering binder.

## Screens

Call customer service if you need assistance with technical details.

MODEL	SIZE	STANDARD (WATER)	
792/794/796	IN.	MATERIAL	OPENING
792MFH SM, 794MFH SM, 796MFH SM	2 – 4	304SS	0.062
	5 – 6	304SS	0.125

## ⚠ WARNING

The 796MFH SM is a Class 300 Strainer drilled for Class 600 Flanges.

Bolted Covers required above 150 psi or 200°F.

## Reference Standards

ASME B16.5 Pipe Flanges and Flanged Fittings  
 ASME B16.34 Valves - Flanged, Threaded, and Welding End

## Dimensions and Weights

SIZE		DIMENSIONS										WEIGHT				Cv VALUE						
in.	mm	A		B		C		D		E		F		G (NPT)		792		794				
		Class 150	Class 300	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lb	kg	lb	kg			
2	51	10 <sup>5</sup> / <sub>8</sub>	270	10 <sup>5</sup> / <sub>8</sub>	270	8 <sup>3</sup> / <sub>16</sub>	208	7 <sup>1</sup> / <sub>2</sub>	191	20	508	12 <sup>5</sup> / <sub>8</sub>	321	16 <sup>3</sup> / <sub>8</sub>	416	1 <sup>1</sup> / <sub>4</sub>	32	115	52	121	55	45
2 <sup>1</sup> / <sub>2</sub>	64	13 <sup>1</sup> / <sub>2</sub>	343	14 <sup>1</sup> / <sub>4</sub>	362	12	305	8 <sup>5</sup> / <sub>16</sub>	211	20	508	18	457	21	533	1 <sup>1</sup> / <sub>2</sub>	38	223	101	233	106	45
3	76	13 <sup>1</sup> / <sub>2</sub>	343	14 <sup>1</sup> / <sub>4</sub>	362	12	305	8 <sup>5</sup> / <sub>16</sub>	211	20	508	18	457	21	533	1 <sup>1</sup> / <sub>2</sub>	38	223	101	233	106	110
4	102	16	406	16 <sup>1</sup> / <sub>2</sub>	419	16 <sup>3</sup> / <sub>8</sub>	429	15 <sup>3</sup> / <sub>4</sub>	400	15 <sup>3</sup> / <sub>8</sub>	403	23 <sup>3</sup> / <sub>8</sub>	594	25 <sup>1</sup> / <sub>2</sub>	648	1 <sup>1</sup> / <sub>2</sub>	38	443	201	466	211	160
5	127	22	559	22 <sup>3</sup> / <sub>8</sub>	581	18 <sup>1</sup> / <sub>2</sub>	470	17 <sup>1</sup> / <sub>2</sub>	445	15 <sup>3</sup> / <sub>8</sub>	403	23 <sup>3</sup> / <sub>8</sub>	606	26 <sup>3</sup> / <sub>8</sub>	276	1 <sup>1</sup> / <sub>2</sub>	38	820	372	850	385	450
6	152	22	559	22 <sup>3</sup> / <sub>8</sub>	581	18 <sup>1</sup> / <sub>2</sub>	470	17 <sup>1</sup> / <sub>2</sub>	445	15 <sup>3</sup> / <sub>8</sub>	403	23 <sup>3</sup> / <sub>8</sub>	606	26 <sup>3</sup> / <sub>8</sub>	276	1 <sup>1</sup> / <sub>2</sub>	38	820	372	850	385	450

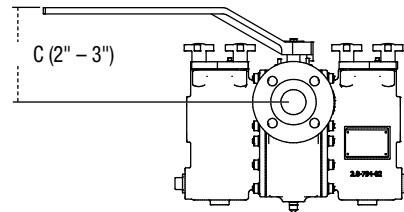
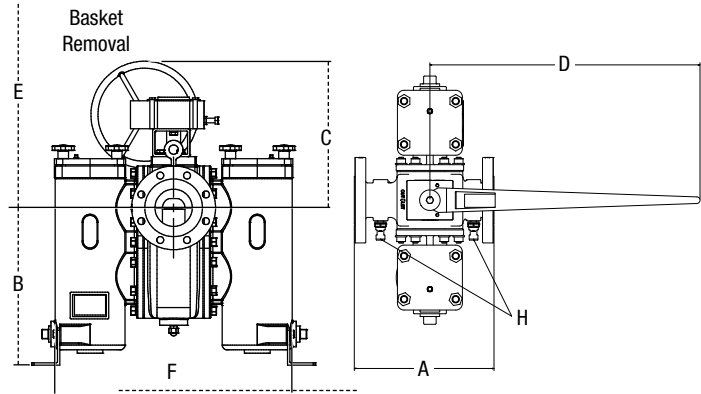
## Materials

792MFH SM, 794MFH SM, 796MFH SM	
Body	316 Stainless Steel ASTM A351 Grade CF8M
Cover	316 Stainless Steel ASTM A351 Grade CF8M
Seat	PTFE
Pressure Sensor	Mixed Composite
Pressure Sensor Adapter	Mixed Composite
Sensor Mounting Clip	Stainless Steel
O-ring	Viton®
Ball	Monel, Bronze, or Stainless Steel

Note:

Pickling and passivation available on request. Consult Factory.

Alternate seats and O-ring materials available.



Models 792MFH SM, 794MFH SM

## Pressure Sensor Port

SIZE		H (792MFH SM)	H (794MFH SM)	H (796MFH SM)
		(NPT)	(NPT)	(NPT)
in.	mm	in.	in.	in.
2	51	1/2	1/8	1/8
2 <sup>1</sup> / <sub>2</sub>	64	1/2	1/8	1/8
3	76	1/2	1/8	1/8
4	102	1/2	1/8	1/8
5	127	1/2	1/8	1/8
6	152	1/2	1/8	1/8

# How to order Mueller Steam Specialty Model 792MFH SM, 794MFH SM, 796MFH SM

## Example 4.0 792MFDH SM

This is a 4" Class 150 flanged duplex basket smart strainer with a carbon steel body and 316SS ball.

**4.0 792MFDH SM**

**Size:** \_\_\_\_\_

**Model:** \_\_\_\_\_  
791 - Class 125  
792 - Class 150  
794 - Class 300  
796 - Class 600  
691 - Class 125 Large Diameter  
692 - Class 150 Large Diameter

**Connection:** \_\_\_\_\_  
S - Screwed, Sizes ¾" – 1½"  
F - Flanged, Sizes ¾" – 1½"  
MF - Flanged, Sizes 2" – 16"

**Body:** \_\_\_\_\_  
A - Cast Iron  
B - Bronze  
D - Carbon Steel  
H - Stainless Steel

**Ball/Disc:** \_\_\_\_\_  
Q - Monel  
B - Bronze  
H - Stainless Steel

**Option:** \_\_\_\_\_  
SM - Smart & Connected (includes pressure sensors, Sensor Control Monitor **sold separately**).



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