

Simplex, Duplex, Y-Type, Temporary Strainers, Baskets and Screens

Standard Cast Pipeline Strainers



EATON

Powering Business Worldwide

Eaton Pipeline Strainers

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Protecting pumps, filters, nozzles, flowmeters, valves, heat exchangers, condensers, oil burners, boilers and other process system components from damaging pipeline debris is what Eaton Pipeline Strainers do best.

For more than 50 years, Eaton strainers have led the way with designs that meet the growing and rigorous demands of process and manufacturing industries, utilities, and municipalities.

No Waiting for Delivery— 11,000+ Model Numbers Available

Maintaining the largest and broadest inventory of strainers in the industry, we can provide off-the-shelf delivery of simplex, duplex, and Y strainers in metals such as cast iron, carbon steel, bronze and stainless steel; and in corrosion resistant plastics such as PVC and Corzan® CPVC.

A Strainer for Every Application

There is an Eaton pipeline strainer for just about any straining application imaginable. We offer a broad and complete range of every type of strainer in pipeline sizes from 1/4" to 60".

We'll Design a Strainer Just for You

For a unique configuration or size, unusually high pressure, or a special alloy, we have the capability and experience to economically fabricate a strainer to exactly meet your needs.

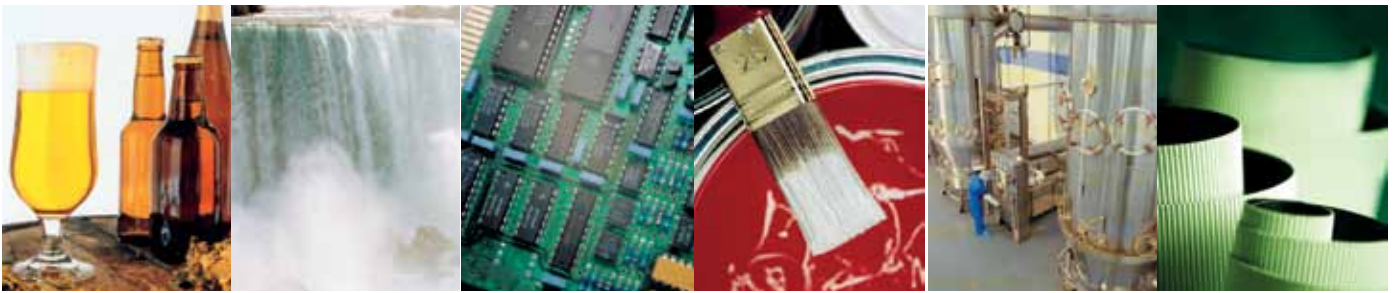
Unbeatable Eaton Quality

Eaton maintains quality assurance programs that are qualified to ISO 9001-2000 and ASME section VIII, Division 1. These are in addition to Eaton's own stringent in-house EQS quality systems.

Our Quality Management System is monitored and certified by DNV.

Worldwide Customer Support

No matter where your plant is located, an Eaton representative is available to assist you. We have a dedicated customer service support network serving all major cities in the United States, Canada, Europe, Middle East and Asia. Available help when and where you need it.



Do you have a unique application? When a standard strainer just won't work, Eaton can fabricate a strainer just for you according to your specifications. If you need special materials of construction, super high pressure ratings or have special dimensions, our engineers will design and fabricate a strainer just for you.

Strainer Applications

Chemicals

There are innumerable areas where the presence of a pipeline strainer means a cleaner product, protection of equipment, and/or simple separation of solids from liquids. There is scarcely a chemical operation involving liquid flow which cannot be improved or guaranteed longer running life by the installation of a pipeline strainer in the line.

Industrial and Municipal Water

Eaton strainers are used to take debris from lakes, streams and wells that can damage or clog equipment. They also remove leaves, insects, feathers, etc. from cooling tower water where the system is open to the atmosphere. For desalinization equipment, they take out dirt or other unwanted matter from the water before it is treated for salt removal. Spent waste water is frequently passed through a basket strainer to take out material which should not go into a sewer or a waterway.

Pharmaceuticals and Cosmetics

Ointments, lotions and similar products which may contain clumps of undispersed or undissolved matter are

pumped through pipeline strainers. In the manufacture of lipstick, for instance, unwanted lumps can ruin the product.

Petroleum

Pipeline strainers clean unwanted material from petroleum products ranging from crude oil to gasoline. A specific case is fuel oil, which can contain gums, tars or other dirt that can plug the nozzles of an oil burner. Every industrial oil burner is equipped with a pipeline strainer to screen these out. Strainers are used in similar ways in refineries and in oil handling operations to keep debris away from pumps and meters.

Pulp and Paper

Smooth paper finishes require that coatings be free of pigment clumps. Pipeline strainers in the coating lines catch and retain the lumps. They are also used to clean traces of pulp or paper from white water effluent before it is discharged.

Process Equipment

Expensive equipment is often protected against damage from scale, dirt and by-products, or from costly shutdown due to the presence of these materials, by installing a pipeline strainer ahead of them in the line. Heat exchangers, condensers

and pumps use strainers on their intake sides. Flow meters and spray nozzles are kept from clogging by pipeline strainers.

Paint, Ink and Latex

Undissolved lumps of resin, skins or clumps of pigment can ruin costly coating products. They are hard to detect, yet easy to avoid when using Eaton strainers.

Marine Industry

Pipeline strainers are instrumental in handling sea water for cooling lines, fire control lines, sanitary lines and general cleaning lines. This water comes from outside the ship and can contain a good deal of undesirable matter. Strainers are used on board ships to clean fuel, hydraulic and lubricating systems.

Tank Cars and Trucks

A basket strainer installed on a tank truck which must dispense liquids can catch solid material which is not wanted. Many chemical products undergo changes during storage or transport which result in solid residues. The presence of solids in liquid fertilizers or pesticides, for example, can cause clogging of spray equipment. For this reason, many tank trucks and cars are equipped with strainers.

Commercial Buildings, Hospitals and Schools

Pipeline strainers are used on cooling towers and boilers to protect them from damage due to scaling.

Food Industry

Strainers are used to remove bits of pulp, skins or other unwanted matter from fruit juices. They are used to remove lumps from chocolate syrup and wax from honey. The baking industry strains bone and gristle from molten lard with basket strainers, and also uses them to remove bits of dough, seeds, etc. from discharge water. Straining water allows it to be recycled and used for other purposes.

Power Generation

The electric power industry uses strainers to clean water for cooling and to protect equipment. They also strain transformer oil to avoid clogging of the circulating lines.

More Information

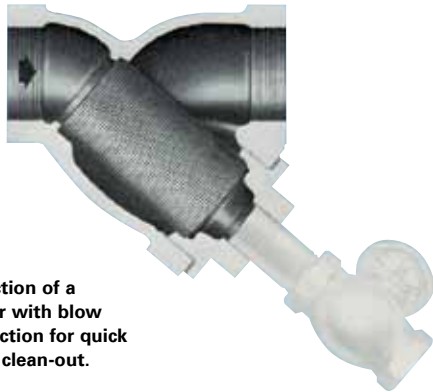
For specific, detailed application information consult an Eaton Application Specialist. Eaton Pipeline Strainers are primarily for liquid applications.

Model 85 Heavy-Duty Y Strainer

Introduction to Y Strainers

Y strainers are used in a wide variety of liquid and gas straining applications to protect downstream process system components in many industrial applications. Water handling applications—where it's important to protect equipment that could be damaged or clogged by unwanted sand, gravel or other debris—commonly use Y strainers.

Y strainers are devices for mechanically removing unwanted solids from liquid, gas or steam lines by means of a perforated or wire mesh straining element. They are used in pipelines to protect pumps, meters, control valves, steam traps, regulators and other process equipment.



Cross-section of a Y Strainer with blow off connection for quick and easy clean-out.

For cost effective straining solutions, Y strainers work well in a multitude of applications. When the amount of material to be removed from the flow is relatively small—resulting in long intervals between screen cleanings—the strainer screen is manually cleaned by shutting down the line and removing the strainer cap. For applications with heavier dirt loading, Y strainers can be fit with a "blow off" connection that permits the screen to be cleaned without removing it from the strainer body.



Carbon steel and stainless steel Y strainers are offered in sizes for 1/4" to 10" in pipelines

- 1/4" to 10"
- Carbon Steel and Stainless Steel
- Threaded, Flanged & Socket Weld Connections

FEATURES

- Heavy Duty Construction
- Compact Design
- Bolted or Threaded Covers
- Standard Stainless Steel Screens

OPTIONS

- Perforated Stainless Steel Screens - 1/32" to 1/2"
- 20, 40, 60, 80, 100, 150, 200, 325 and 400 Mesh Stainless Steel Screens
- Monel Screens

Eaton Model 85 Y Strainers are heavy duty filters—engineered to withstand even the most aggressive of industrial and commercial applications year after year. When you consider the critical operational parameters often associated with Y strainers used in steam and gas applications, it's important to consider the quality of the vessel since it's subjected to extremely high temperatures and high pressures.

A Y strainer is a pressure vessel. Its wall thickness can be analyzed and evaluated by different applicable standards. Every rugged Eaton Model 85 Y Strainer is designed to

stand up the most demanding real world applications.

Eaton heavy duty Model 85 Y Strainers are furnished with high quality stainless steel screens that are carefully fabricated to fit the strainer body perfectly. This, coupled with the precision machined screen seat on the body of the strainer, protects against any bypass.

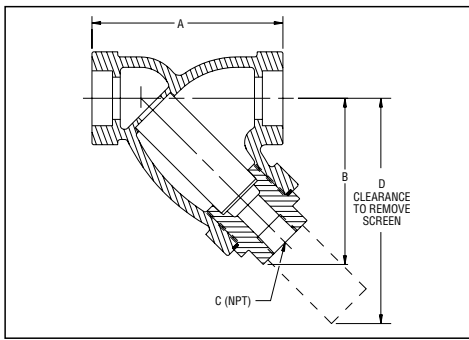
Eaton Model 85 Heavy Duty Y Strainers are available in carbon steel or stainless steel for pipeline sizes from 1/4" to 10", with threaded, flanged, or socket weld connections.

Eaton Model 85 Y Strainers 1/4 to 10" Carbon and Stainless Steel-Threaded, Socket Weld & Flanged

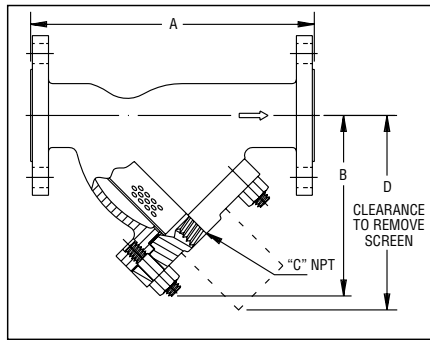
| Size | Material | End Connection | Cover | Rating (WOG) non-shock | Model Number |
|-------------|-----------------|------------------------------|----------|------------------------|--------------|
| 1/4" to 2" | Carbon Steel | Threaded or Socket Weld 600# | Threaded | 1480 psi @ 100°F | 85 |
| 1/4" to 2" | Stainless Steel | Threaded or Socket Weld 600# | Threaded | 1440 psi @ 100°F | 85 |
| 1/2" to 10" | Carbon Steel | Flanged 150# | Bolted | 285 psi @ 100°F | 85 |
| 1/2" to 10" | Carbon Steel | Flanged 300# | Bolted | 740 psi @ 100°F | 85 |
| 1/2" to 10" | Stainless Steel | Flanged 150# | Bolted | 275 psi @ 100°F | 85 |
| 1/2" to 10" | Stainless Steel | Flanged 300# | Bolted | 720 psi @ 100°F | 85 |

Dimensional Drawings

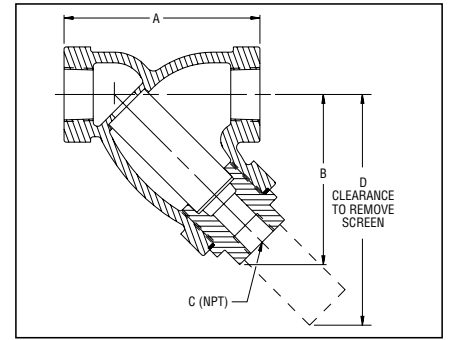
Typical Socket Weld End Y Strainer



Typical Flanged Y Strainer



Typical Threaded Y Strainer



Flanged Carbon Steel and Stainless Steel – 150 # (in/mm)

| Size | A | B | C (Nom.) | D | Wt (lb / kg) |
|-------|-------------|-------------|------------|-------------|--------------|
| 1/2 | 5.00 / 127 | 2.75 / 70 | 3/8 / 10 | 3.50 / 89 | 5 / 2.3 |
| 3/4 | 5.63 / 143 | 3.00 / 76 | 3/8 / 10 | 4.00 / 102 | 7 / 3.2 |
| 1 | 6.38 / 162 | 3.64 / 92 | 1/2 / 15 | 5.00 / 127 | 9 / 4.1 |
| 1-1/4 | 7.25 / 184 | 4.25 / 108 | 3/4 / 20 | 5.75 / 146 | 14 / 6.3 |
| 1-1/2 | 8.88 / 226 | 5.75 / 146 | 3/4 / 20 | 6.50 / 165 | 18 / 8.2 |
| 2 | 7.88 / 200 | 6.00 / 152 | 1 / 25 | 8.25 / 210 | 16 / 7.3 |
| 2-1/2 | 9.75 / 248 | 6.50 / 165 | 1 / 25 | 9.25 / 235 | 25 / 11.4 |
| 3 | 10.00 / 254 | 7.25 / 184 | 1-1/4 / 32 | 10.50 / 267 | 35 / 16 |
| 4 | 12.13 / 308 | 9.75 / 248 | 1-1/2 / 40 | 14.75 / 375 | 70 / 32 |
| 6 | 18.50 / 470 | 14.25 / 362 | 2 / 50 | 21.00 / 533 | 130 / 59 |
| 8 | 21.63 / 549 | 18.00 / 457 | 2 / 50 | 26.75 / 679 | 240 / 109 |
| 10 | 26.00 / 660 | 22.50 / 565 | 2 / 50 | 33.75 / 857 | 300 / 136 |

Flanged Carbon Steel and Stainless Steel – 300 # (in/mm)

| Size | A | B | C (Nom.) | D | Wt (lb / kg) |
|-------|-------------|-------------|------------|-------------|--------------|
| 1/2 | 5.25 / 133 | 2.75 / 70 | 3/8 / 10 | 3.50 / 89 | 6 / 2.7 |
| 3/4 | 6.00 / 152 | 3.00 / 76 | 3/8 / 10 | 4.00 / 102 | 9 / 4.1 |
| 1 | 6.88 / 175 | 3.63 / 92 | 1/2 / 15 | 5.00 / 127 | 13 / 6.0 |
| 1-1/4 | 7.75 / 197 | 4.25 / 108 | 3/4 / 20 | 5.75 / 146 | 18 / 8.2 |
| 1-1/2 | 9.38 / 238 | 5.75 / 146 | 3/4 / 20 | 6.50 / 165 | 24 / 11 |
| 2 | 8.63 / 219 | 6.25 / 159 | 1 / 25 | 8.25 / 210 | 30 / 13.6 |
| 2-1/2 | 10.63 / 270 | 7.00 / 178 | 1 / 25 | 9.25 / 235 | 40 / 18.2 |
| 3 | 12.00 / 305 | 7.75 / 197 | 1-1/4 / 32 | 10.50 / 267 | 55 / 25 |
| 4 | 14.50 / 368 | 10.50 / 267 | 1-1/2 / 40 | 14.75 / 375 | 105 / 48 |
| 6 | 20.00 / 508 | 14.75 / 375 | 2 / 50 | 21.00 / 533 | 200 / 91 |
| 8 | 23.38 / 594 | 18.75 / 476 | 2 / 50 | 27.00 / 686 | 360 / 164 |
| 10 | 27.38 / 695 | 22.75 / 578 | 2 / 50 | 34.50 / 876 | 430 / 195 |

Socket Weld and Threaded Carbon Steel and Stainless Steel – 600 # (in/mm)

| Size | A | B | C (Nom.) | D | Wt (lb / kg) |
|-------|------------|------------|----------|------------|--------------|
| 1/4 | 3.00 / 76 | 3.00 / 76 | 3/8 / 10 | 4.00 / 102 | 2 / 0.9 |
| 3/8 | 3.00 / 76 | 3.00 / 76 | 3/8 / 10 | 4.00 / 102 | 2 / 0.9 |
| 1/2 | 3.00 / 76 | 3.00 / 76 | 3/8 / 10 | 4.00 / 102 | 2 / 0.9 |
| 3/4 | 3.75 / 95 | 3.50 / 89 | 3/8 / 10 | 4.75 / 121 | 4 / 1.8 |
| 1 | 4.63 / 118 | 4.00 / 102 | 1/2 / 15 | 5.75 / 146 | 6 / 2.7 |
| 1-1/4 | 5.00 / 127 | 4.63 / 118 | 3/4 / 20 | 6.50 / 165 | 8 / 3.6 |
| 1-1/2 | 5.63 / 143 | 5.25 / 133 | 3/4 / 20 | 7.50 / 191 | 10 / 4.5 |
| 2 | 7.00 / 178 | 5.75 / 146 | 1 / 25 | 8.75 / 222 | 15 / 6.8 |

Consult us for 12" and larger size dimensions. Dimensions and weights are for references only. Contact us for certified drawings.

See page 30 for Pressure Drop Data

Model 72 Simplex Basket Strainer



- Sizes 3/8" to 8"
- Iron, Bronze, Carbon Steel or Stainless Steel
- Threaded or Flanged

FEATURES

- Quick open cover—no tools needed
- Heavy wall construction
- Large capacity baskets
- Machined basket seat
- Threaded drain
- Perforated stainless basket
- Mounting feet for stable installation

OPTIONS

- Basket perforations from 1/32" to 1/2"
- Basket mesh from 20 to 400
- Monel baskets
- Viton, PTFE-encapsulated, or EPDM seals
- Vent valves
- Gauge taps - 1/4" NPT
- Magnetic basket inserts
- Pressure differential gauge and switch

Introduction to Basket Strainers

Basket strainers are generally used with liquids and where regular or frequent cleaning is needed. Basket strainers hold considerably more material than Y strainers and they offer a lower pressure drop.

A basket strainer is installed upright and the basket is lifted out from the top. This makes it easier to use with gummy or sticky fluids or with large pipeline sizes where the filled basket weight can be considerable. However, unlike a Y strainer, it also means that a basket strainer has to be installed in a horizontal line.

A simplex basket strainer is used where the line can be shut down for short periods to clean or change the basket. It becomes an integral part of the pipeline and all flow passes through it.

The Eaton Model 72 has been the industry standard simplex basket strainer for over 50 years. It's perfect for industrial and commercial applications where the line can be temporarily shut down for strainer basket cleaning or changeout.

A reason for its popularity is the unusually large basket capacity. The free straining area with a perforated basket is about six times the cross sectional pipe area (even more in many sizes). No tools are needed to open the cover. The quick opening, swinging yoke can be disassembled and the basket removed in seconds. On sizes 4" and larger, a special cover clamp is provided to distribute the seating pressure and to ensure positive seating of the cover.

Another feature is a threaded drain on every size strainer (fitted with a plug). Sizes 2" and larger are provided with legs that bolt to the floor for rock solid installation.

Wall thicknesses are exceptionally heavy. The basket seats are precision machined to give a tight seal and prevent any material from by-passing the basket. The Eaton Model 72 Simplex Basket Strainer is a top quality, heavy duty unit designed to stand up to the most demanding of applications. There is simply no better simplex basket strainer made.

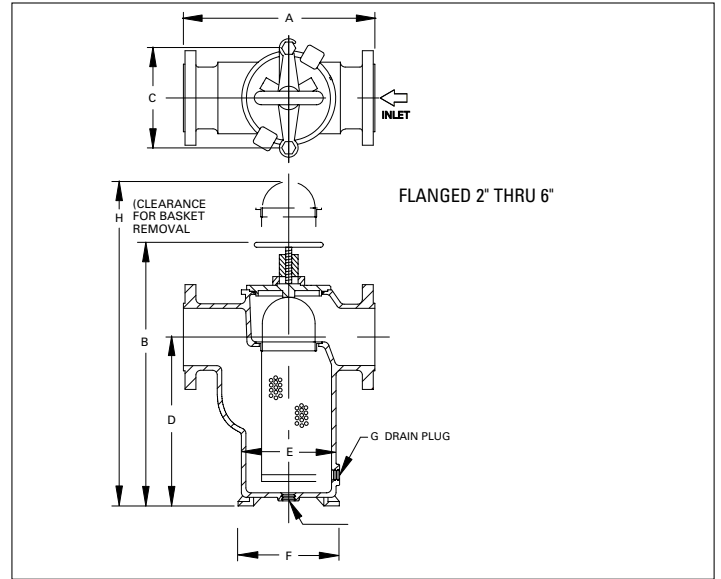
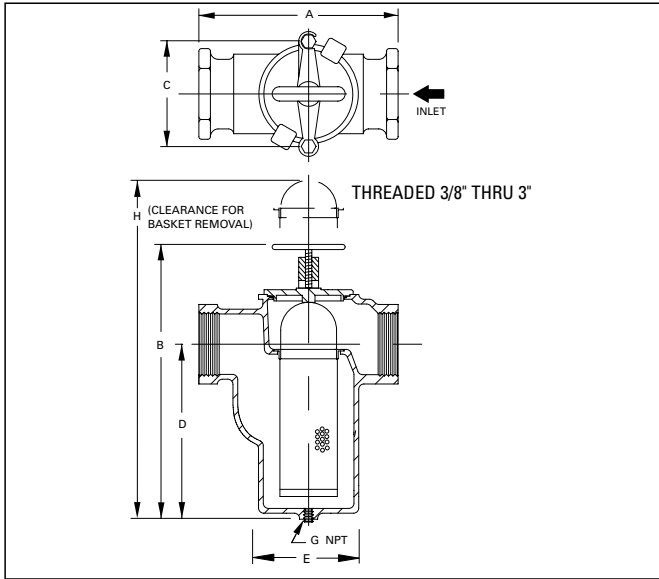
Model 72 Simplex

| Size | Material | End Connection | Seals | Pressure Rating |
|------------|-----------------|----------------|--------|-----------------|
| 3/8" to 3" | Iron and Bronze | Threaded | Buna N | 200 psi @ 100°F |
| 1" to 3" | Carbon Steel | Threaded | Buna N | 200 psi @ 100°F |
| 1" to 3" | Stainless Steel | Threaded | Viton® | 200 psi @ 100°F |
| 1" to 8" | Iron | Flanged 125# | Buna N | 200 psi @ 100°F |
| 1" to 8" | Bronze | Flanged 150# | Buna N | 200 psi @ 100°F |
| 1" to 8" | Carbon Steel | Flanged 150# | Buna N | 200 psi @ 100°F |
| 1" to 8" | Stainless Steel | Flanged 150# | Viton® | 200 psi @ 100°F |

Mod. 72Cv Factors*

| Size | Value | Size | Value |
|--------|-------|--------|-------|
| 3/8" | 15.0 | 2" | 73 |
| 1/2" | 15.0 | 2-1/2" | 125 |
| 3/4" | 15.0 | 3" | 180 |
| 1" | 22.5 | 4" | 350 |
| 1-1/4" | 31.5 | 6" | 900 |
| 1-1/2" | 46.0 | 8" | 1400 |

* For water with clean, perforated basket



Threaded Model 72 Dimensions (in/mm)

Dimensions and weights are for reference only. Contact us for certified drawings.

| Size | A | B | C | D | E | F | G | H | -----Net Weight (Lbs / Kg)----- | | | |
|-------|-------------|-------------|------------|-------------|------------|---|------------|----------|---------------------------------|--------------|---------|-----------------|
| | | | | | | | | | Bronze | Carbon Steel | Iron | Stainless Steel |
| 3/8 | 4.00 / 102 | 6.63 / 168 | 2.88 / 73 | 4.00 / 102 | 2.38 / 60 | - | 3/8 / 10 | 11 / 279 | 4 / 1.8 | — | 4 / 1.8 | - |
| 1/2 | 4.00 / 102 | 6.63 / 168 | 2.88 / 73 | 4.00 / 102 | 2.38 / 60 | - | 3/8 / 10 | 11 / 279 | 4 / 1.8 | — | 4 / 1.8 | - |
| 3/4 | 5.38 / 137 | 8.38 / 213 | 4.00 / 102 | 5.00 / 127 | 3.06 / 78 | - | 1/2 / 15 | 13 / 330 | 8 / 3.6 | — | 7 / 3.2 | - |
| 1 | 5.38 / 137 | 8.38 / 213 | 4.00 / 102 | 5.00 / 127 | 3.06 / 78 | - | 1/2 / 15 | 13 / 330 | 8 / 3.6 | 7 / 3.2 | 7 / 3.2 | 7 / 3.2 |
| 1-1/4 | 6.75 / 172 | 9.88 / 251 | 4.88 / 124 | 5.88 / 149 | 3.88 / 99 | - | 1/2 / 15 | 14 / 356 | 13 / 6 | — | 12 / 6 | - |
| 1-1/2 | 7.25 / 184 | 11.00 / 279 | 4.88 / 124 | 7.00 / 178 | 4.00 / 102 | - | 3/4 / 20 | 16 / 406 | 16 / 7 | 15 / 7 | 15 / 7 | 16 / 7.3 |
| 2 | 8.75 / 222 | 13.38 / 340 | 6.75 / 172 | 7.63 / 194 | 5.13 / 130 | - | 1-1/4 / 32 | 21 / 533 | 32 / 15 | 36 / 16 | 28 / 13 | 31 / 14 |
| 2-1/2 | 10.38 / 264 | 14.88 / 378 | 8.00 / 203 | 8.63 / 219 | 6.38 / 162 | - | 1-1/2 / 40 | 26 / 660 | 49 / 22 | 52 / 24 | 42 / 19 | 51 / 23 |
| 3 | 11.50 / 292 | 17.75 / 468 | 8.00 / 203 | 11.38 / 298 | 6.63 / 168 | - | 1-1/2 / 40 | 28 / 711 | 60 / 27 | 60 / 27 | 52 / 23 | 60 / 27 |

Flanged Model 72 Dimensions (in/mm)

| Size | A | B | C | D | E | F | G | H | -----Net Weight (Lbs / Kg)----- | | | |
|-------|-------------|--------------|-------------|-------------|-------------|-------------|----------|--------------|---------------------------------|--------------|-----------|-----------------|
| | | | | | | | | | Bronze | Carbon Steel | Iron | Stainless Steel |
| 1 | 7.63 / 194 | 8.38 / 213 | 4.00 / 102 | 5.00 / 127 | 8.38 / 213 | - | 1/2 / 15 | 13.00 / 330 | 16 / 7 | 9 / 4 | 9 / 4 | 9 / 4 |
| 1-1/2 | 10.25 / 260 | 11.00 / 279 | 4.88 / 124 | 7.00 / 178 | 11.00 / 279 | - | 3/4 / 20 | 16.00 / 406 | 30 / 14 | 17 / 7.7 | 17 / 7.7 | 17 / 7.7 |
| 2 | 10.50 / 268 | 13.75 / 349 | 6.75 / 172 | 7.63 / 194 | 5.13 / 130 | 6.25 / 159 | 3/8 / 10 | 20.00 / 508 | 49 / 22.3 | 36 / 16 | 36.5 / 17 | 36 / 16 |
| 2-1/2 | 11.63 / 295 | 15.63 / 397 | 8.00 / 203 | 8.88 / 226 | 6.38 / 162 | 7.63 / 194 | 3/8 / 10 | 23.00 / 584 | 64 / 29.1 | 63 / 27 | 54 / 25 | 63 / 29 |
| 3 | 13.13 / 334 | 18.00 / 457 | 8.00 / 203 | 10.63 / 270 | 6.50 / 165 | 8.00 / 203 | 3/8 / 10 | 27.00 / 686 | 85 / 38.6 | - | 76 / 35 | - |
| 3 | 13.13 / 334 | 18.75 / 476 | 7.94 / 202 | 12.00 / 305 | 6.50 / 165 | 8.00 / 203 | 1/2 / 15 | 27.00 / 686 | — | 86 / 39 | - | 86 / 39 |
| 4 | 16.75 / 425 | 19.88 / 505 | 10.75 / 273 | 10.75 / 273 | 9.63 / 245 | 11.38 / 289 | 1/2 / 15 | 30.00 / 762 | 140 / 63.6 | - | 125 / 55 | - |
| 4 | 17.25 / 438 | 19.88 / 505 | 10.69 / 272 | 10.69 / 272 | 9.25 / 235 | 11.38 / 289 | 1/2 / 15 | 30.00 / 762 | — | 130 / 59 | - | 130 / 59 |
| 5 | 18.13 / 461 | 25.13 / 638 | 10.75 / 273 | 15.25 / 387 | 10.00 / 254 | 11.38 / 289 | 1/2 / 15 | 41.00 / 1041 | 182 / 82.7 | - | 170 / 775 | - |
| 6 | 19.63 / 499 | 28.50 / 724 | 10.69 / 272 | 18.38 / 467 | 10.00 / 254 | 11.38 / 289 | 1/2 / 15 | 46.00 / 1168 | 270 / 122.7 | 235 / 107 | 200 / 91 | 235 / 107 |
| 8 | 27.00 / 686 | 40.50 / 1029 | - | 27.00 / 686 | 13.75 / 349 | 17.50 / 445 | 1/2 / 15 | 60.00 / 1524 | 600 / 272.7 | 550 / 250 | 500 / 227 | 550 / 250 |

Model 72 Straight Flow Basket Strainer

• Iron or Bronze • Sizes 10" to 18" • Flanged



FEATURES

- Quick open cover
- Straight through flow design
- Low pressure loss
- Convuluted basket design
- Hand removable basket
- Threaded Drain
- Buna-N O-ring seal
- Standard perforated stainless steel basket
- Low profile
- No tools required for access

OPTIONS

- Basket perforations from 1/32" to 1/2"
- Basket mesh of 20 or 40
- Monel baskets
- Vent valves
- Drain valves
- Gauge taps - 1/4" NPT
- Pressure differential gauge and switches

Large size pipelines with high flow rates require a unique type of basket strainer. The typical design for smaller size pipelines just won't perform efficiently—the pressure loss would be too high and the baskets too large to remove and clean easily.

These problems have been solved by the Eaton Straight Through Flow design simplex basket strainer. With this straight through flow, pressure loss is greatly

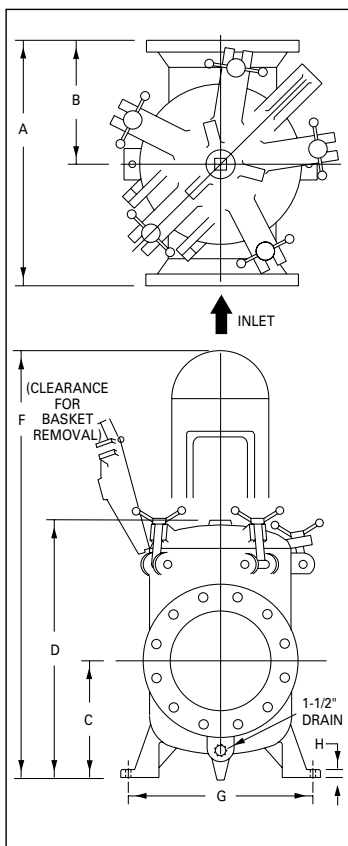
reduced and, at the same time, results in a compact strainer that can fit in tight spaces.

The perforated or mesh straining screen in the basket is convoluted (pleated). This increases the amount of straining area available while at the same time reducing the overall basket size and weight. This makes it easy to remove the basket from the strainer housing. No lifting tackle is required. The quick

opening cover provides fast and easy access to the basket—making it quick and easy to service. Over time, this can save you considerable time and money in labor.

When selecting a pipeline strainer for a large size piping system with high flow rates, be sure to consider all the factors, not just initial pressure loss. The amount of straining area in the basket is critical to reducing the amount of time between

cleanings or change out. Also remember that if cleaning the basket is difficult, or requires two people to perform, operating costs will continue to be too high. The design of the Eaton Model 72 Straight Through Simplex Basket Strainer takes all these operating parameters into consideration and is the best simplex strainer for higher flow applications in large pipelines.



Selection Chart

| Size | Material | End Connection | Seals | Pressure Rating |
|------------|----------|----------------|--------|-----------------|
| 10" to 12" | Iron | Flanged 125# | Buna N | 200 psi @ 100°F |
| 10" to 12" | Bronze | Flanged 150# | Buna N | 200 psi @ 100°F |
| 14" to 18" | Iron | Flanged 125# | Buna N | 150 psi @ 100°F |
| 14" to 18" | Bronze | Flanged 150# | Buna N | 150 psi @ 100°F |

Cv Factors*

| Size | Value |
|------|-------|
| 10" | 2300 |
| 12" | 3200 |
| 14" | 5000 |
| 16" | 6000 |
| 18" | 7000 |

* For water with clean, perforated basket

Dimensions (in/mm) Model 72 Straight Flow

| Pipe Size | A | B | C | D | F | G | H | Net Wt. (lb / kg) | | |
|-----------|-------------|-------------|-------------|--------------|--------------|-------------|--------|-------------------|------------|--------|
| | Iron | Bronze | Iron | Bronze | Iron | Bronze | Iron | Bronze | Iron | Bronze |
| 10 | 23.00 / 584 | 11.00 / 279 | 12.19 / 310 | 29.00 / 737 | 47.00 / 1194 | 19.00 / 483 | 1 5/16 | 420 / 191 | 500 / 227 | |
| 12 | 27.00 / 686 | 13.00 / 330 | 16.75 / 425 | 38.00 / 965 | 67.00 / 1702 | 23.00 / 584 | 1 | 550 / 250 | 825 / 374 | |
| 14 | 31.00 / 787 | 15.50 / 394 | 18.75 / 476 | 45.00 / 1143 | 77.00 / 1956 | 27.00 / 686 | 1 | 850 / 386 | 1150 / 522 | |
| 16 | 31.00 / 787 | 15.50 / 394 | 18.75 / 476 | 45.00 / 1143 | 77.00 / 1956 | 27.00 / 686 | 1 | 975 / 443 | 1400 / 635 | |
| 18 | 31.00 / 787 | 15.50 / 394 | 18.75 / 476 | 45.00 / 1143 | 77.00 / 1956 | 27.00 / 686 | 1 | 1000 / 454 | — | |

Dimensions and weights are for reference only. Contact us for certified drawings.

Model 72SJ Steam Jacketed Basket Strainer

• Carbon Steel or Stainless Steel • Sizes 1" to 8" • Flanged



FEATURES

- NPT steam connections
- Up to 100 psi steam pressure
- Quick open cover—no tools required
- Large capacity basket
- Threaded drain plug
- Machined basket seat
- Viton® Seals
- Standard perforated stainless steel basket

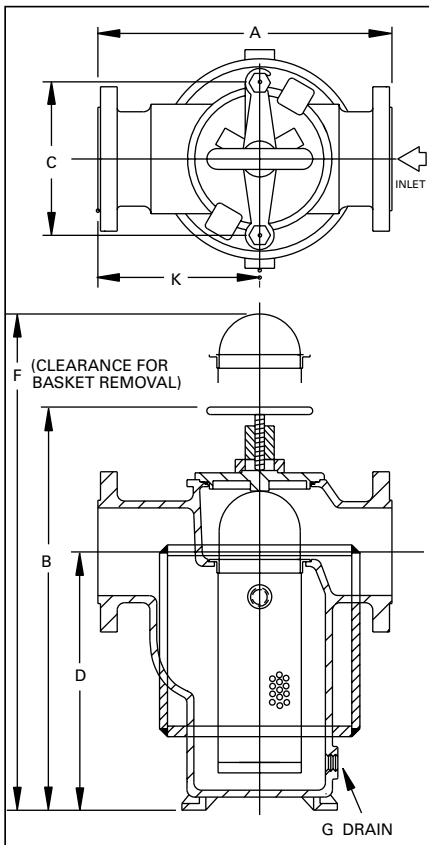
OPTIONS

- Basket perforations from 1/32" to 1/2"
- Basket mesh from 20 to 400
- Monel baskets
- Vent valves
- Drain valves
- Gauge taps - 1/4" NPT
- Pressure differential gauge and switches

The Model 72SJ is for applications where materials must be kept hot in order to remain fluid. Examples are chocolate, asphalt, resins and polymers. The strainer body temperature is maintained by circulating steam or a heat transfer fluid through the strainer jacket.

The basic strainer used in the Model 72SJ is our popular Model 72 Simplex Basket Strainer which has, over the years, proven itself a standard of industry. All of the features of the Model 72 have been retained, including large basket capacity with an open

area that is at least six times the pipe cross-sectional area. No tools are needed to open the cover for basket cleaning or change out—an operation that is accomplished in a matter of seconds with a yoke type cover. The standard cover seal is Viton® and can be used in most applications up to a temperature of 400°F. The strainer body is provided with either a carbon steel or stainless steel jacket welded to the cast body. The steam jacket will handle steam pressures up to 100 psi.



Selection Chart

| Size | Material | End Connections* | Seals | Pressure Rating |
|----------|-----------------|------------------|--------|-----------------|
| 1" to 8" | Carbon Steel | Flanged 150# | Viton® | 200 psi @ 100°F |
| 1" to 8" | Stainless Steel | Flanged 150# | Viton® | 200 psi @ 100°F |

C_v Factors*

| Size | Value | Size | Value |
|--------|-------|------|-------|
| 1" | 22.5 | 3" | 180 |
| 1-1/4" | 31.5 | 4" | 350 |
| 1-1/2" | 46.0 | 6" | 900 |
| 2" | 73.0 | 8" | 1400 |
| 2-1/2" | 125 | | |

* For water with clean, perforated basket

Dimensions (in/mm) Model 72SJ Straight Flow

| Size | A | B | C | D | F | (NPT)(NPT) | | K | Net Wt. (lb / kg) | |
|-------|-----------|------------|-----------|-----------|---------|------------|-----|-----------|-------------------|-----------|
| | | | | | | G | I | | Carbon Steel | Stainless |
| 2 | 10.50/268 | 13.75/349 | 6.75/172 | 7.63/194 | 20/508 | 3/8 | 1/2 | 5.75/146 | 48/22 | 45/20 |
| 2-1/2 | 11.63/295 | 15.63/397 | 8.00/203 | 8.75/222 | 23/584 | 3/8 | 1/2 | 6.38/162 | 81/37 | 75/34 |
| 3 | 13.13/334 | 18.75/476 | 8.00/203 | 12.00/305 | 27/686 | 1/2 | 1/2 | 7.25/184 | 112/51 | 105/48 |
| 4 | 17.25/438 | 19.88/505 | 10.75/273 | 10.75/273 | 29/737 | 1/2 | 3/4 | 9.63/245 | 165/75 | 155/70 |
| 6 | 19.63/499 | 28.50/724 | 10.75/273 | 18.38/467 | 46/1168 | 1/2 | 3/4 | 10.81/275 | 315/143 | 280/127 |
| 8 | 27.00/686 | 40.50/1029 | — | 27.00/686 | 60/152 | 1/2 | 3/4 | 15.75/400 | 653/297 | 653/297 |

Dimensions and weights are for reference only. Contact us for certified drawings.

Model 72L Tefzel-Lined Basket Strainer

• Carbon Steel with Tefzel® Plastic Lining • Sizes 1" to 6" • Flanged

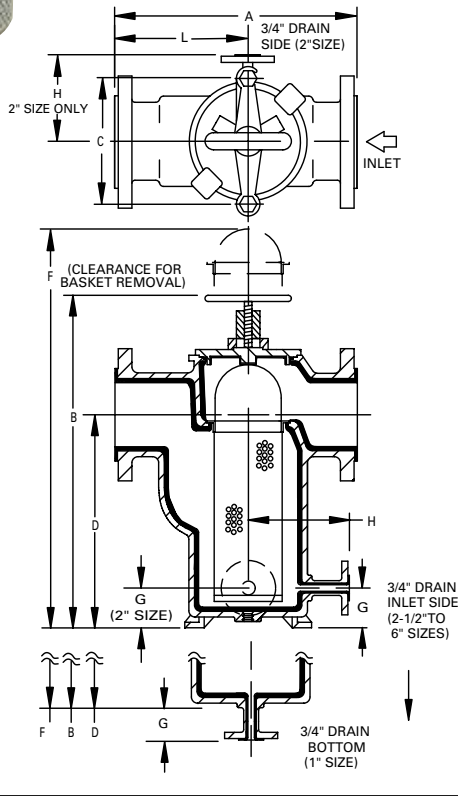


FEATURES

- Excellent corrosion resistance
- Abrasion resistant 1/8" Tefzel® lining
- Service temperatures to 300°F
- Quick opening covers
- Large capacity baskets
- Flanged drain
- Standard perforated basket
- Low cost alternative to exotic alloy strainers

OPTIONS

- Monel baskets
- Hastelloy C baskets
- Tefzel-coated baskets
- Consult factory for available perf and mesh sizes



A continuous lining of advanced fluoropolymer resin makes the Model 72L simplex strainer an excellent low cost alternative to exotic alloy strainers in a wide variety of corrosive or abrasive lined piping applications. These applications include waste water treatment, paper mills, hazardous materials, flue gas systems, ultra pure water handling, chemical and petrochemical processing. The basic design of the Model 72L is that of our popular, time tested Model 72.

The body and cover of the Model 72L are lined, not just coated, with Tefzel®—which protects all wetted surfaces of the strainer—making it impervious to attack by chemicals that can cause rapid deterioration of other types of plastics and all but the most costly metal alloys.

The Tefzel fluoropolymer lining is inert to strong mineral acids, inorganic bases, halogens and metal salt solutions. Even carboxylic acids, anhydrides, aromatic and aliphatic hydrocarbons, alcohols, aldehydes, ketones, ethers, esters, chlorocarbons and classic polymer solvents have little effect on the Tefzel lining. Service temperatures can range up to 300°F in many applications. The lining also displays excellent mechanical strength when handling abrasive slurries.

Fitted with fluoropolymer coated perforated baskets or mesh baskets made of Monel or Hastelloy C these strainers can be used in almost any lined piping or similar corrosive/abrasive strainer application.

Tefzel is a trademark of E.I. DuPont

Dimensions and weights are for reference only. Contact us for certified drawings.

Selection Chart

| Size | Material | End Connections | Seals | Pressure Rating |
|----------|---------------------------------|-----------------|--------|-----------------|
| 1" to 6" | Carbon Steel with Tefzel® Liner | Flanged 150# | Viton® | 200 psi @ 100°F |

Cv Factors*

| Size | Value |
|--------|-------|
| 1" | 23 |
| 2" | 72 |
| 2-1/2" | 135 |
| 3" | 170 |
| 4" | 350 |
| 6" | 880 |

* For water with clean, perforated basket

Basket & Screen Effective Area – Tefzel®-Coated Basket

| Pipe Size (in) | Perf. Size (in) | Pipe Area (in ²) | Screen Area (in ²) | Free Area (in ²) | Free/Pipe Ratio |
|----------------|-----------------|------------------------------|--------------------------------|------------------------------|-----------------|
| 1" | 1/32 | 0.86 | 19.5 | 5.2 | 6.1 |
| 2" | 1/16 | 3.35 | 50.9 | 15.8 | 4.7 |
| 2-1/2" | 1/16 | 4.78 | 80.2 | 24.9 | 5.2 |
| 3" | 5/32 | 7.39 | 114.5 | 72.1 | 9.8 |
| 4" | 5/32 | 12.73 | 168.3 | 106.0 | 8.3 |
| 6" | 5/32 | 28.90 | 324.2 | 204.2 | 7.1 |

Dimensions (in/mm)

| Pipe Size | A | B | C | D | F | G | H | J | K | L | Dry Wt. lb / kg |
|-----------|-------------|-------------|-------------|-------------|-----------|-----------|------------|-------------|------------|-------------|-----------------|
| 1 | 7.88 / 200 | 9.00 / 229 | 4.00 / 102 | 5.00 / 127 | 12 / 305 | 2.75 / 70 | — | — | — | 4.50 / 114 | 15 / 7 |
| 2 | 10.75 / 273 | 13.75 / 349 | 6.75 / 172 | 7.63 / 194 | 20 / 508 | 1.88 / 48 | 5.63 / 143 | 5.50 / 140 | 2.50 / 64 | 5.88 / 149 | 48 / 22 |
| 2-1/2 | 11.88 / 302 | 15.75 / 400 | 8.00 / 203 | 8.88 / 226 | 23 / 584 | 2.19 / 56 | 6.25 / 159 | 6.50 / 165 | 2.88 / 73 | 6.50 / 165 | 70 / 32 |
| 3 | 13.75 / 349 | 18.75 / 476 | 8.00 / 203 | 12.00 / 305 | 27 / 686 | 2.31 / 59 | 6.38 / 162 | 7.00 / 118 | 3.13 / 80 | 7.38 / 187 | 95 / 43 |
| 4 | 17.50 / 445 | 20.00 / 508 | 10.75 / 273 | 10.69 / 272 | 30 / 762 | 2.38 / 60 | 7.75 / 197 | 10.00 / 254 | 3.88 / 99 | 9.75 / 248 | 139 / 63 |
| 6 | 19.88 / 505 | 28.25 / 718 | 10.75 / 273 | 18.31 / 465 | 46 / 1168 | 2.19 / 56 | 7.88 / 200 | 10.00 / 254 | 5.00 / 127 | 11.00 / 279 | 250 / 1134 |

Model 30R Economy Basket Strainer

Sizes 1-1/2" to 8" • Iron • Threaded or Flanged



FEATURES:

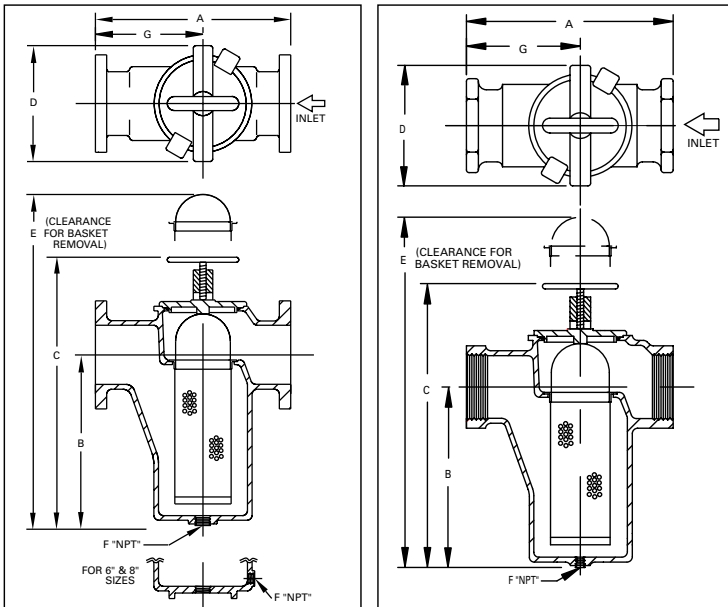
- Hand removable cover
- Drain plug
- Machined basket seat
- Standard perforated stainless steel basket

OPTIONS:

- Basket perforations from 1/32" to 1/2"
- Basket mesh from 20 to 325
- Monel baskets
- Vent valves
- Drain valves
- Gauge taps - 1/4" NPT
- Magnetic basket inserts
- Pressure differential gauges and switches

The Eaton Model 30R is a high quality, low cost simplex basket strainer...perfect for cost sensitive applications. While the cost of the Model 30R is low, its design incorporates many features found only on more expensive units including machined basket seats to protect against bypass insuring all of the flow is strained. The cover of the Model 30R is a clamp type

and is hand removable without the need for tools. This makes access to the basket quick and easy for cleaning or change out and every size strainer comes standard with a drain plug. The Model 30R is the best choice simplex strainer for low or moderate pressure applications such as swimming pools, cooling towers, and large air conditioning installations.



Dimensions and weights are for reference only. Contact us for certified drawings.

Selection Chart

| Size | Material | End Connections | Seals | Pressure Rating |
|--------------|----------|--------------------------|--------|------------------|
| 1-1/2" to 3" | Iron | Threaded | Buna N | 200 psi at 100°F |
| 1-1/2" to 8" | Iron | Threaded or Flanged 125# | Buna N | 200 psi at 100°F |

Cv Factors*

| Size | Value | Size | Value |
|--------|-------|------|-------|
| 1-1/2" | 58 | 4" | 240 |
| 2" | 90 | 6" | 370 |
| 2-1/2" | 140 | 8" | 600 |
| 3" | 200 | | |

* For water with clean, perforated basket

Dimensions (in/mm) Flanged

| Pipe Size | A | B | C | D | E | F | G | Dry Wt. (lb / kg) |
|-----------|-------------|-------------|-------------|-------------|--------------|------------|-------------|-------------------|
| 1-1/2 | 7.75 / 197 | 6.50 / 165 | 10.63 / 270 | 6.00 / 152 | 14.88 / 378 | 3/4 / 20 | 4.44 / 113 | 12 / 5.5 |
| 2 | 9.63 / 245 | 7.50 / 191 | 11.63 / 295 | 7.50 / 191 | 17.38 / 441 | 1-1/4 / 32 | 5.63 / 143 | 27 / 12.3 |
| 2-1/2 | 11.00 / 279 | 9.13 / 232 | 15.25 / 387 | 8.00 / 203 | 22.38 / 568 | 1-1/4 / 32 | 5.88 / 149 | 45 / 20.5 |
| 3 | 11.88 / 302 | 9.13 / 232 | 15.25 / 387 | 8.00 / 203 | 22.38 / 568 | 1-1/4 / 32 | 6.50 / 165 | 59 / 26.6 |
| 4 | 13.75 / 349 | 9.63 / 245 | 16.63 / 422 | 9.25 / 235 | 30.00 / 762 | 1-1/2 / 40 | 8.44 / 214 | 71 / 32.2 |
| 6 | 17.50 / 445 | 12.38 / 315 | 26.13 / 664 | 14.75 / 375 | 35.00 / 889 | 1/2 / 13 | 10.31 / 262 | 150 / 68.1 |
| 8 | 23.63 / 600 | 17.75 / 451 | 32.63 / 829 | 14.75 / 375 | 48.00 / 1219 | 1/2 / 13 | 14.50 / 368 | 230 / 104.3 |

Dimensions (in/mm) Threaded

| Pipe Size | A | B | C | D | E | F | G | Dry Wt. (lb / kg) |
|-----------|-------------|------------|-------------|------------|-------------|------------|------------|-------------------|
| 1-1/2 | 7.00 / 178 | 6.50 / 165 | 10.63 / 270 | 6.00 / 152 | 14.88 / 378 | 3/4 / 20 | 3.88 / 99 | 7 / 3.2 |
| 2 | 8.50 / 216 | 7.50 / 191 | 11.63 / 295 | 7.50 / 191 | 17.38 / 441 | 1-1/4 / 32 | 4.81 / 122 | 20 / 9.1 |
| 2-1/2 | 11.50 / 292 | 9.13 / 232 | 15.25 / 387 | 8.00 / 203 | 22.38 / 568 | 1-1/4 / 32 | 6.00 / 152 | 34 / 15.5 |
| 3 | 11.50 / 292 | 9.13 / 232 | 15.25 / 387 | 8.00 / 203 | 22.63 / 575 | 1-1/4 / 32 | 6.00 / 152 | 34 / 15.5 |

Model 510 Multi-Basket Strainer

Sizes 8" to 36" • Iron or Carbon Steel • Flanged



FEATURES:

- Four baskets per strainer
- Bolted cover
- Straight through flow design
- Compact
- Threaded drain
- Standard perforated stainless steel basket

OPTIONS:

- Basket perforations from 1/32" to 1/2"
- Basket mesh from 20 to 400
- Monel baskets
- Drain valves
- Gauge taps - 1/4" NPT
- Basket flange gaskets
- Cover lift davit
- Bronze or stainless steel construction
- Magnetic basket inserts
- Pressure differential gauges and switches

The Model 510 Simplex Strainer is designed for larger piping systems having flow rates up to 40,000 gpm. Unlike other large size simplex strainers the Model 510 has a multi-basket design. Four strainer baskets per unit strain the process media and give the strainer an extremely high dirt removal capability—an important consideration in larger size strainers that, because of their size and design, take longer for basket cleaning or change out. The longer the strainer stays in service between cleaning, the less expensive its total operating costs.

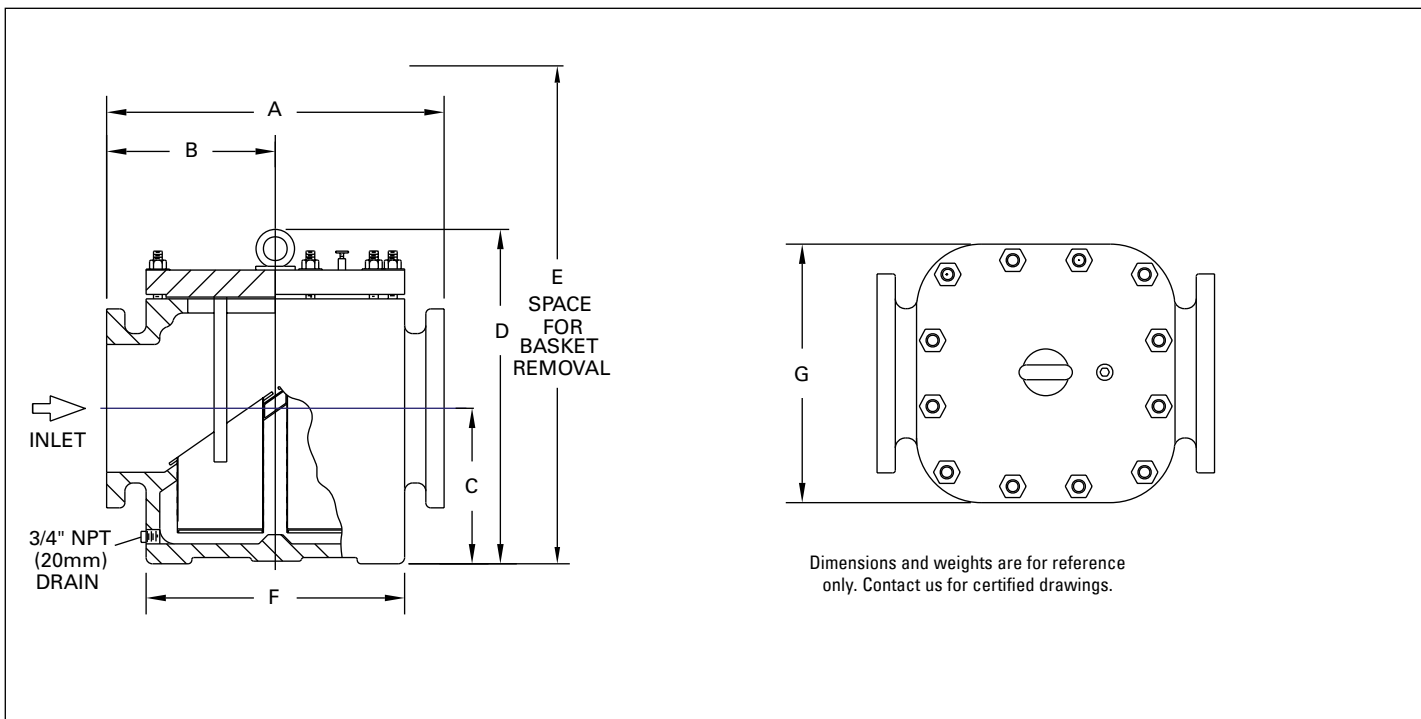
To reduce the pressure loss to an absolute minimum the Model 510 has a straight through flow configuration. This is made possible by a unique basket design that incorporates a slanted top to permit straight through flow.

The use of four baskets, rather than one or two, helps to keep operating costs low because the overall size of each basket can be smaller. This means that cleaning is a one person job. Two or more operators, or lifting tackle, are not needed to lift the baskets out of the strainer housing. To make this job even easier and quicker the Model 510 can be ordered with an optional

cover lifting davit with which the operator can raise the strainer cover and swing it out of the way for access to the strainer baskets. The four basket design of the Model 510 provides an additional benefit as well: the centerline to bottom and centerline to top dimension of the strainer are very short—creating a low-profile design that is ideally suited for installation in cramped quarters.

For large size piping systems with high flow rates the Model 510 offers significant advantages over ordinary large size strainers...advantages that will improve performance and reduce operating costs over the life of the strainer.

Model 510 Multi-Basket Strainer



Selection Chart

| Size | Material | End Connections* | Gasket | Pressure Rating |
|------------|--------------|------------------|--------------|-----------------|
| 8" to 24" | Iron | Flanged 125# | Non-Asbestos | 125 psi @ 100°F |
| 30" to 36" | Iron | Flanged 125# | Non-Asbestos | 70 psi @ 100°F |
| 8" to 24" | Carbon Steel | Flanged 150# | Non-Asbestos | 150 psi @ 100°F |
| 8" to 16" | Carbon Steel | Flanged 300# | Non-Asbestos | 300 psi @ 100°F |

Cv Factors*

| Size | Value | Size | Value | Size | Value |
|------|-------|------|-------|------|-------|
| 8" | 1600 | 14" | 4800 | 24" | 13000 |
| 10" | 2500 | 16" | 5800 | 30" | 19000 |
| 12" | 3500 | 20" | 9000 | 36" | 23000 |

* For water with clean, perforated basket

Dimensions (in/mm)

| Pipe Size | A | B | C | D | E | F | G | -----Dry Wt (lb / kg)----- | |
|-----------|--------------|-------------|--------------|--------------|------------|--------------|--------------|----------------------------|--------------|
| | | | | | | | | Iron | Carbon Steel |
| 8 | 23.25 / 591 | 11.63 / 295 | 9.13 / 232 | 20.13 / 511 | 38 / 965 | 18.00 / 457 | 18.50 / 470 | 547 / 249 | 547 / 249 |
| 10 | 26.13 / 664 | 13.06 / 332 | 11.38 / 289 | 23.75 / 603 | 44 / 1118 | 20.25 / 514 | 21.00 / 533 | 730 / 332 | 730 / 332 |
| 12 | 29.00 / 737 | 14.50 / 368 | 14.63 / 372 | 28.38 / 721 | 52 / 1321 | 22.25 / 565 | 22.75 / 578 | 1080 / 491 | 1080 / 491 |
| 14 | 30.50 / 775 | 15.25 / 387 | 16.75 / 425 | 31.25 / 794 | 60 / 1524 | 24.63 / 626 | 25.13 / 638 | 1360 / 618 | 1360 / 618 |
| 16 | 33.50 / 851 | 16.75 / 425 | 19.13 / 486 | 35.50 / 902 | 66 / 1676 | 27.13 / 689 | 27.75 / 705 | 1750 / 795 | 1750 / 795 |
| 20 | 44.75 / 1137 | 22.00 / 559 | 28.50 / 724 | 46.25 / 1175 | 88 / 2235 | 32.75 / 832 | 34.75 / 883 | 3330 / 1514 | 3330 / 1514 |
| 24 | 44.38 / 1127 | 22.19 / 564 | 31.50 / 800 | 52.25 / 1327 | 98 / 2489 | 36.63 / 930 | 38.50 / 978 | 4550 / 2068 | 4550 / 2068 |
| 30 | 61.50 / 1562 | 30.75 / 781 | 41.63 / 1057 | 66.50 / 1689 | 125 / 3175 | 47.50 / 1207 | 47.50 / 1207 | 8880 / 4036 | 8880 / 4036 |
| 36 | 62.00 / 1575 | 31.00 / 787 | 41.63 / 1057 | 66.50 / 1689 | 125 / 3175 | 47.50 / 1207 | 47.50 / 1207 | 9700 / 4409 | 9700 / 4409 |

Model 53BTX Ball Type Duplex Basket Strainer

Sizes 3/4" to 4" • Iron, Bronze, Carbon Steel or Stainless Steel • Threaded or Flanged



Patented diverter cartridge assures bubble-tight isolation of basket chamber during cleaning. No more rushing to finish the job before the out-of-service chamber overflows. And with no overflow, there's no cleanup.

FEATURES

- Dynamic ball sealing system for long life
- Easy-to-operate lever handle—no gear box required
- Unique seat and seal design requires no adjustments
- Reinforced polymer seats for longer service life
- Foot pads for rock solid installation
- Double-stem O-rings for positive sealing
- Easy-to-access body vent valve
- Side drain plugs on each basket well
- Piston seal strainer basket cover
- Easy access for diverter cartridge removal
- Optional steam jacket construction

A duplex basket strainer can operate continuously and never has to be shut down for cleaning. When one basket is full, the flow is shifted to the other one. The first basket is then removed, cleaned and replaced.

Duplex or double basket strainers, are valuable in locations where it is impossible to shut off flow to stop the operation. Examples of these processes include cleaning fuel oil in large industrial oil burners, all types of marine applications, screening water in cooling towers and straining fluids in continuously running chemical operations.

A double sealing system on both the upper and lower stems guards against any possible leakage. Special reinforced polymer seats are used for extended service life. Should cartridge service become necessary, just remove four bolts and the cartridge comes right out through the top of the strainer. There's no need to take the strainer completely apart or to remove it from the line.

Finally, standard foot mounting pads insure a rock solid installation no matter where the strainer is installed.

Available options for the Model 53BTX include differential pressure gauges, with or without switches, and magnetic separators installed in the strainer basket for removing fine ferrous particulate matter from the process media.

A Better Duplex Strainer Design

A unique flow diverter valve cartridge isolates the two strainer basket chambers. An easy-to-turn handle diverts the flow from one chamber to the other—the flow in the pipeline is never shut off.

No special tools are needed. The chamber is drained and then the cover is lifted and swung clear of the chamber opening. Dynamic diverter cartridge seals prevent fluid bypass into the out-of-service chamber.

A Better Flow Diverter Cartridge

The unique flow diverter cartridge features highly dynamic sealing system that ensures exceptionally long seat life and positive sealing. There is no need for manual internal or external ball support adjustments—and the low operating torque means the strainer can be operated with an easy-turn handle. A gear box is not needed.

Better for All Applications

The compact, low profile Model 53BTX fits into spaces ordinary strainers might not, yet it still uses full-size strainer baskets with a low pressure drop performance.

And, there's a strainer basket for every application. The standard basket is made of Type 316 stainless steel. Monel or Hastelloy C materials are available. Baskets with openings from 3/4" down to 45 microns are offered.

For easy basket servicing there are two drain plugs, one on each side. Additionally, there is an easy-to-access vent valve on top of each basket well cover.



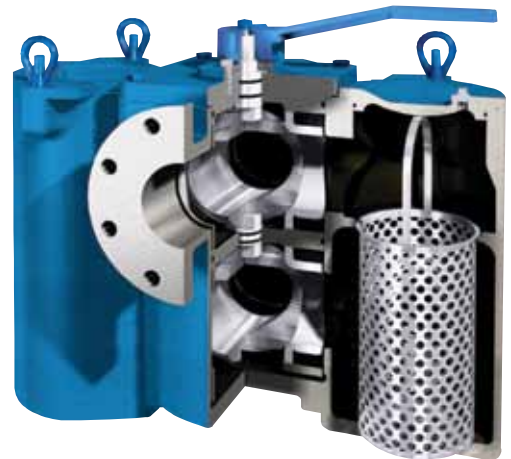
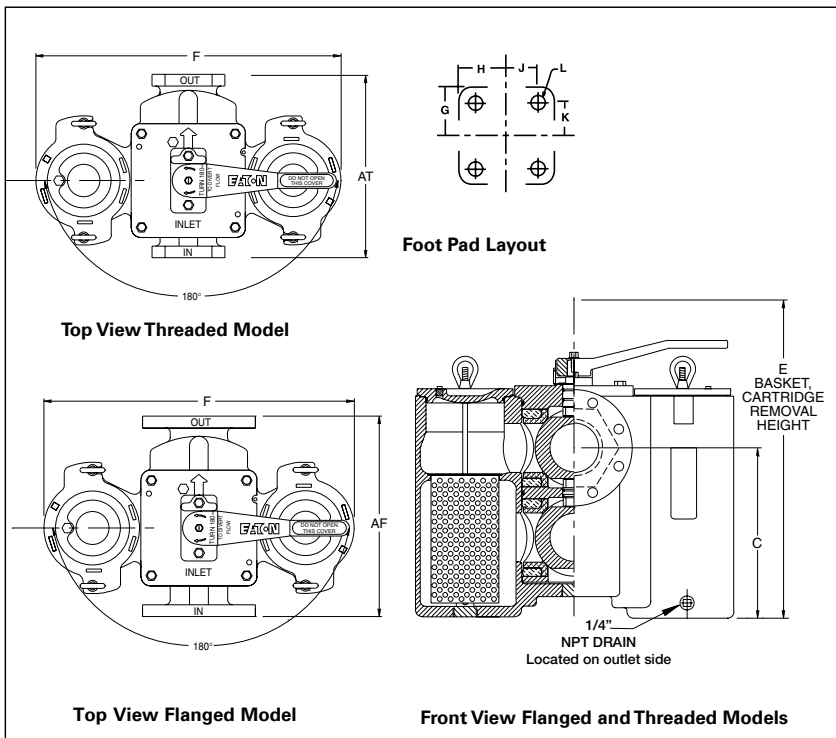
1" stainless steel Model 53BTX with flanged connection

Selection Table

| Size | Body & Cartridge Material | End Connection | Seat/Seal | Diverter Balls | Pressure Rating PSIG @ 150°F |
|--------------------------------------|---------------------------|----------------|--------------|-----------------|------------------------------|
| 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" | Iron | Threaded | TFE/ Buna N* | Stainless Steel | 200 |
| 1", 1-1/2", 2", 2-1/2", 3", 4" | Iron | Flanged 125# | TFE/ Buna N* | Stainless Steel | 200 |
| 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" | Bronze | Threaded | TFE/ Buna N* | Stainless Steel | 200 |
| 3/4", 1", 1-1/4", 1-1/2", 2" | Carbon Steel | Threaded | TFE/ Buna N* | Stainless Steel | 200 |
| 3/4", 1", 1-1/4", 1-1/2", 2" | Stainless Steel | Threaded | TFE/ Buna N* | Stainless Steel | 200 |
| 1", 1-1/2", 2", 2-1/2", 3", 4" | Bronze | Flanged 150# | TFE/ Buna N* | Stainless Steel | 200 |
| 1", 1-1/2", 2", 2-1/2", 3", 4" | Carbon Steel | Flanged 150# | TFE/ Buna N* | Stainless Steel | 200 |
| 1", 1-1/2", 2", 2-1/2", 3", 4" | Stainless Steel | Flanged 150# | TFE/ Buna N* | Stainless Steel | 200 |

*Viton® standard for SSSL, optional for iron, bronze and carbon steel.

Should the diverter valve require service, it slides right out the top of the strainer body. A minimum of parts, easily replaced, makes service a snap. Exploded view shows simplicity of design.



Dimensions and weights are for reference only. Contact us for certified drawings. Pressure equalizing valve and piping standard on 4" Model 53 Duplex Strainers.

Dimensions (in/mm)

| Pipe Size | AF | AT | C | E | F | G | H | J | K | L | Weight-Iron | | Weight-Bronze | | Weight-Carbon & SS | |
|-----------|-------------|-------------|-------------|-------------|-------------|------------|------------|-----------|------------|-----|-------------|----------|---------------|----------|--------------------|----------|
| | | | | | | | | | | | Flanged | Threaded | Flanged | Threaded | Flanged | Threaded |
| | | | | | | | | | | | lb / kg | lb / kg | lb / kg | lb / kg | lb / kg | lb / kg |
| 3/4 | — | 5.50 / 140 | 5.00 / 127 | 13.38 / 340 | 10.50 / 268 | 3.25 / 83 | 2.13 / 54 | 1.63 / 41 | 2.75 / 70 | 3/8 | — | 37 / 17 | — | 46 / 21 | — | 41 / 19 |
| 1 | 6.88 / 175 | 5.50 / 140 | 5.00 / 127 | 13.38 / 340 | 10.50 / 268 | 3.25 / 83 | 2.13 / 54 | 1.63 / 41 | 2.75 / 70 | 3/8 | 42 / 19 | 37 / 17 | 52 / 24 | 46 / 21 | 47 / 21 | 41 / 19 |
| 1-1/4 | 6.88 / 175 | 7.50 / 190 | 6.81 / 173 | 17.00 / 432 | 13.25 / 330 | 3.25 / 83 | 2.13 / 54 | 1.63 / 41 | 2.75 / 70 | 3/8 | — | 80 / 36 | — | 100 / 45 | — | 89 / 40 |
| 1-1/2 | 9.38 / 238 | 7.50 / 190 | 6.81 / 173 | 17.00 / 432 | 13.25 / 330 | 3.25 / 83 | 2.13 / 54 | 1.63 / 41 | 2.75 / 70 | 3/8 | 90 / 41 | 80 / 36 | 113 / 51 | 100 / 45 | 100 / 45 | 89 / 40 |
| 2 | 10.63 / 270 | 10.00 / 254 | 8.38 / 213 | 21.75 / 552 | 17.38 / 441 | 4.69 / 119 | 2.50 / 64 | 1.81 / 46 | 4.00 / 102 | 5/8 | 167 / 76 | 157 / 71 | 209 / 95 | 197 / 90 | 185 / 84 | 174 / 79 |
| 2-1/2 | 10.75 / 273 | 10.00 / 254 | 8.38 / 213 | 21.75 / 552 | 17.37 / 441 | 4.69 / 119 | 2.50 / 64 | 1.81 / 46 | 4.00 / 102 | 5/8 | 183 / 83 | 157 / 71 | 229 / 104 | 197 / 90 | 203 / 92 | — |
| 3 | 13.50 / 343 | — | 8.88 / 226 | 26.50 / 673 | 22.75 / 578 | 4.69 / 119 | 2.50 / 64 | 1.81 / 46 | 4.00 / 102 | 5/8 | 285 / 129 | — | 357 / 162 | — | 432 / 196 | — |
| 4 | 16.00 / 406 | — | 13.25 / 337 | 33.00 / 838 | 24.75 / 629 | 5.19 / 132 | 3.94 / 100 | 3.25 / 83 | 4.50 / 114 | 5/8 | 389 / 177 | — | 487 / 221 | — | 432 / 196 | — |

Model 50 Plug Type Duplex Basket Strainer

Sizes 5", 6", 8" • Iron, Bronze, Carbon Steel or Stainless Steel • Flanged



FEATURES

- Continuous flow, no shutdown for basket cleaning
- Rugged tapered plug design
- Lift jack prevents galling of the plug
- Quick open cover, no tools needed
- Large capacity baskets
- Threaded drain
- Machined basket seat
- Perforated or mesh stainless steel basket

OPTIONS

- Ductile iron construction
- Basket perforations from 1/32" to 1/2"
- Basket mesh from 20 to 400
- Monel baskets
- Vent valves
- Drain valves
- 1/4" NPT gauge taps
- Magnetic basket inserts
- Steam jacket
- Pressure differential gauge & switch connections
- Viton, PTFE encapsulated or EPDM seals



The Eaton Model 50 Plug Type Duplex Strainer is a simple, economical, and trouble free design—time tested in applications around the world over many years. This type of strainer is actually a high quality, pressure rated plug valve with integral straining baskets.

Switching the flow from one basket to the other is accomplished by moving the operating handle through a 90 degree arc. The design is such that it is impossible for this operation to stop the flow because of the unique port design in the diverter plug.

The entire switching operation takes less than 30 seconds. No tools are needed. The plug is automatically positioned each time in exactly the right spot by integral stops.

Before operating the handle a manual, integral lifting jack, built into the strainer is used to lift the diverter plug off of its seat. After the switching operation, the lifting jack is used to reseat the plug. The lifting jack is specially designed to lift and seat the plug easily, even under high pressures. A built in stop limits the distance the diverter plug can be raised. This minimizes the possibility

of material bypassing the plug while it is rotated. It also prevents debris from building up under the plug and making it difficult to reseat.

Other important features of the plug type Model 50 Duplex Basket Strainers include a quick opening, swing-away yoke design cover. No tools are required to remove the covers for quick and easy access to the strainer baskets, and they go back on just as fast as they came off.

Draining of the basket chambers is simplified with the standard NPT drain taps—and all sizes are

provided with mounting legs for bolting the strainer to the floor for a rock solid installation.

The Eaton plug type Model 50 Duplex Basket Strainer is your best choice for most applications. Its rugged design and ease of operation have made it the duplex strainer of choice around the world in hundreds of different industries.

Selection Chart

| Size | Body Material | Plug Material | End Connections | Seals |
|------------|-----------------|---------------------------|-----------------|--------|
| 5", 6", 8" | Iron | Iron or Bronze | Flanged 125# | Buna N |
| 5", 6", 8" | Bronze | Bronze | Flanged 150# | Buna N |
| 6", 8" | Carbon Steel | Bronze or Stainless Steel | Flanged 150# | Buna N |
| 6", 8" | Stainless Steel | Stainless Steel | Flanged 150# | Viton® |

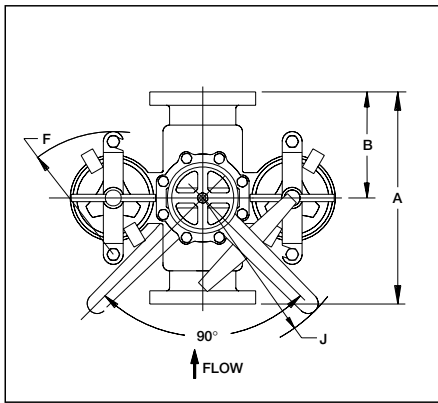
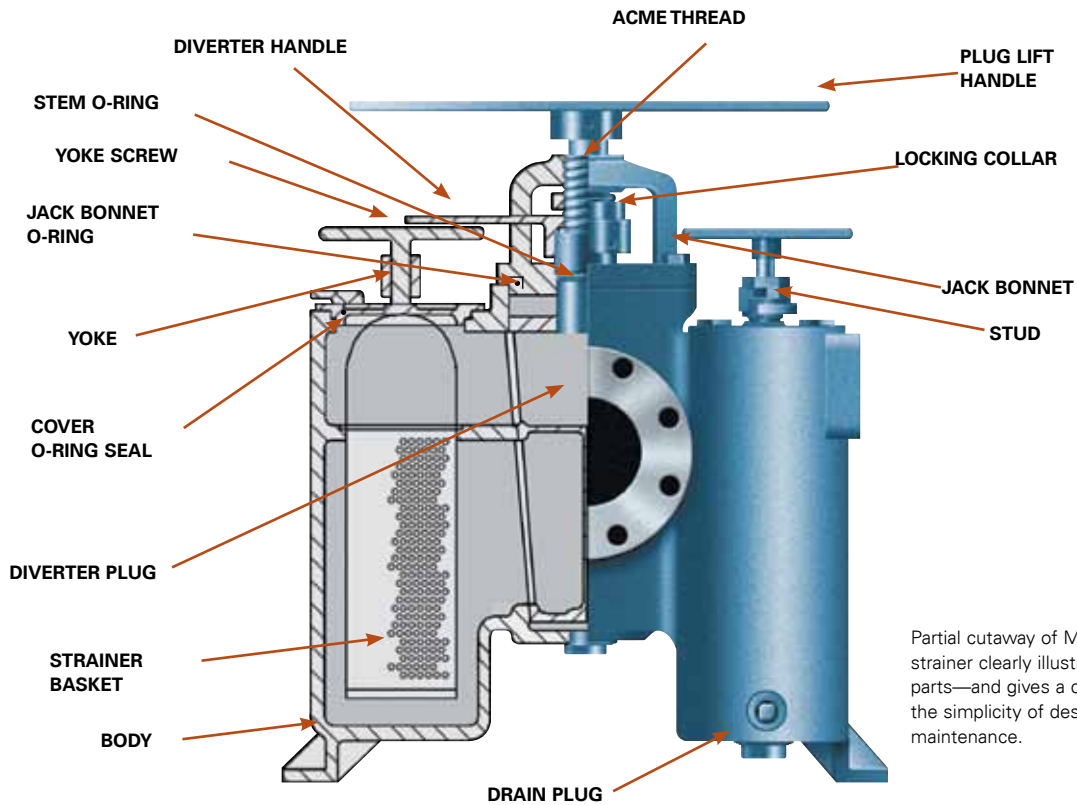
Rating

| Size | Rating |
|------|------------------|
| 5" | 200 psi @ 100°F. |
| 6" | 200 psi @ 100°F. |
| 8" | 150 psi @ 100°F. |

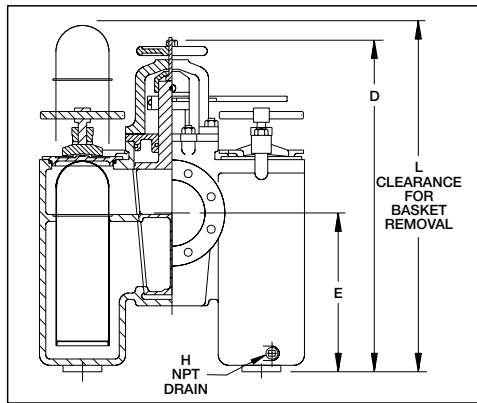
Cv Factors*

| Size | Value |
|------|-------|
| 5" | 300 |
| 6" | 420 |
| 8" | 900 |

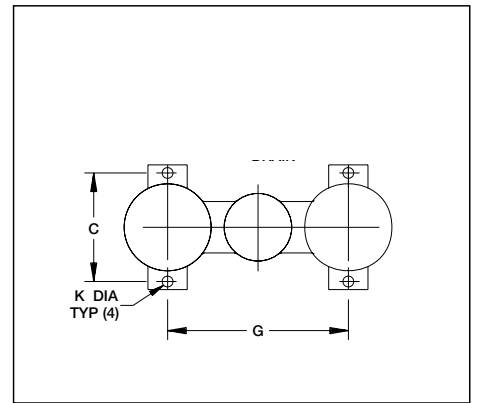
* For water with clean, perforated basket



TOP VIEW



FRONT VIEW



MOUNTING LAYOUT

Dimensions and weights are for reference only. Contact us for certified drawings.

Dimensions (in/mm)

| Pipe Size | A | B | C | D | E | F | G | H | J | K | L | Weight(lb/kg) | | | |
|-----------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|-----------|--------------|------------|---------------|---------------|-------------|--------------|-----------------|
| | | | | | | | | | | | | Cast Iron | Bronze | Carbon Steel | Stainless Steel |
| 5" | 18.38 467 | 9.00 229 | 9.75 248 | 33.25 845 | 14.75 375 | 10.25 260 | 17.19 437 | 3/8 10 | 19.75 502 | 0.56 14 | 41.00 1041 | 403 183 | 412 187 | — | — |
| 6" | 22.00 559 | 12.88 327 | 12.50 318 | 36.25 921 | 19.50 495 | 11.75 298 | 20.75 527 | 3/8 10 | 19.75 502 | 0.63 16 | 42.00 1067 | 500 227 | 583 264 | 580 263 | 615 279 |
| 8" | 25.00 635 | 14.00 356 | 17.00 432 | 50.63 1286 | 23.06 586 | — | 30.75 781 | 1/2 15 | 28.00 711 | 0.94 24 | 56.00 56 | 1500 682 | 1800 818 | 1610 732 | 1670 759 |

Model 50 Large Duplex Basket Strainer

10" to 18" • Iron and Bronze • Flanged



FEATURES

- Continuous flow—no shutdown for basket cleaning
- Compact butterfly valve design
- Quick opening covers
- Convoluted-design baskets
- Threaded drain
- Perforated or mesh stainless steel baskets
- Vent
- Positive shutoff

OPTIONS

- Ductile iron construction
- Basket perforations from 1/32" to 1/2"
- Basket mesh 20 or 40
- Monel baskets
- Vent valves
- Drain valves
- 1/4" NPT gauge taps
- Pressure differential gauge and switch connections
- Magnetic basket inserts

The Eaton Butterfly Valve Type Model 50 Duplex Basket Strainer is a special design with several important features and advantages for large size pipelines with high flow rates.

Flow is switched from one basket chamber to the other by a set of synchronized, high quality butterfly valves. This replaces the diverter plug used on smaller size strainers and gives a straight flow pattern with no sudden changes in flow direction. The result is a very low pressure loss. A 10" strainer of this type, for example, can handle 2000 gpm of water with a pressure drop on only 2 psi. This is the strainer to choose when you have a high flow rate application and a low pressure loss is critical.

Another important benefit of this design is a savings in overall size. It is more

compact than other large size duplex strainers—which means less weight and a smaller profile. This can be very important when space requirements are tight.

This design also uses a unique basket design concept which incorporates a larger screening area. This is done by convoluting (pleating) the perforated sheet in the strainer basket, thus increasing the available screening area while reducing the total basket size. The flow enters the basket from the side, not the top—resulting in a straight-through flow pattern. What all this means in service is a lower pressure drop and greater time between basket cleanings than would be possible with standard-design baskets—a real savings in time and operating costs.

The butterfly valve assembly used to divert the flow from one basket chamber to the other is balanced so a minimum of effort is needed to switch the flow. There is a single handwheel operator, and it can be located on either side of the strainer if accessibility is a problem. There is an arrow on the top of the gear housing that indicates which basket chamber is in service and which is ready for cleaning.

Quick opening covers make strainer basket changing or cleaning quick and easy. No tools or lifting gear are required to open them. This is a feature not often found on strainers of these larger sizes.

If your strainer application is for larger size pipelines with high flow rates, the Eaton Model 50 Duplex offers you several unique features and

advantages over other large size duplex strainers. Among them are: low pressure loss, operator friendly with quick open covers that don't require lifting gear, compact design with a smaller footprint than other strainers, and a special basket design to maximize time between basket cleanings. After you've investigated all the possibilities, you'll realize that this large size Eaton Model 50 Duplex Strainer is in a class by itself and it is cost effective.

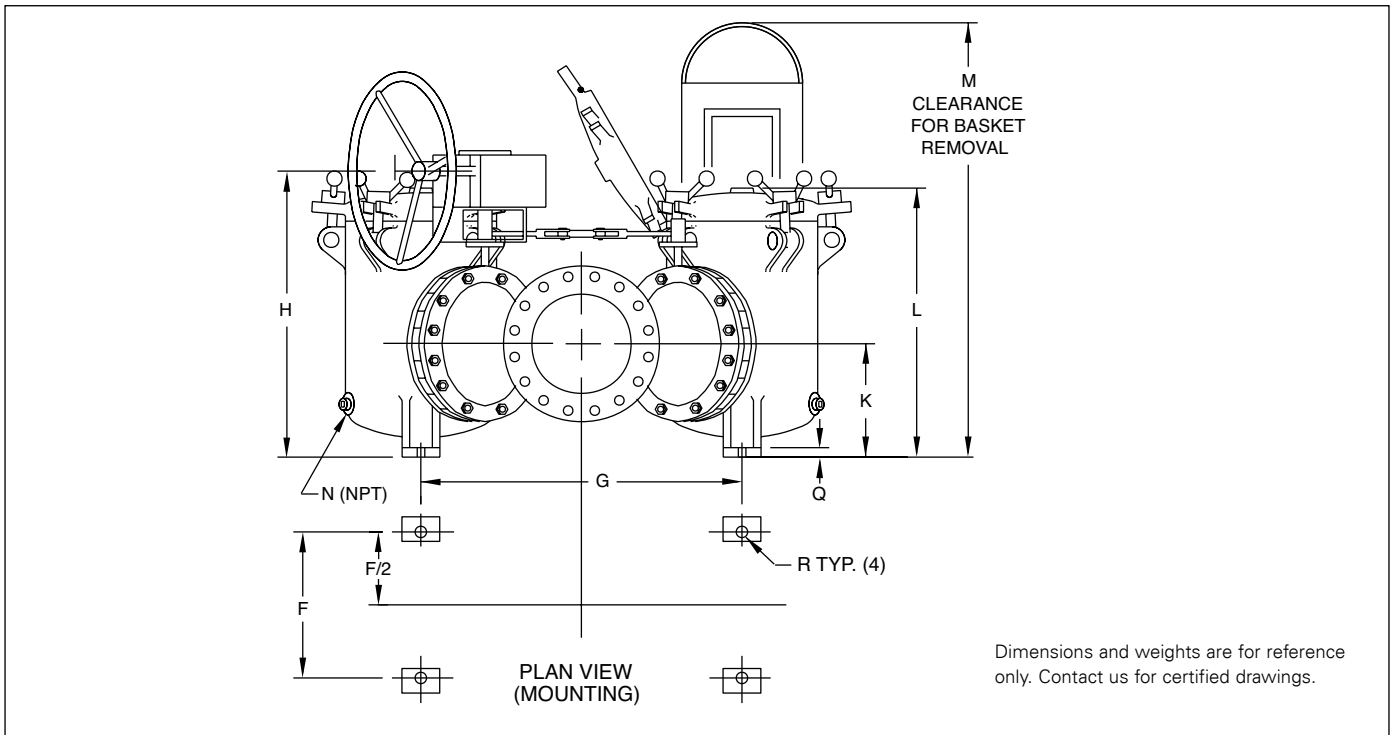
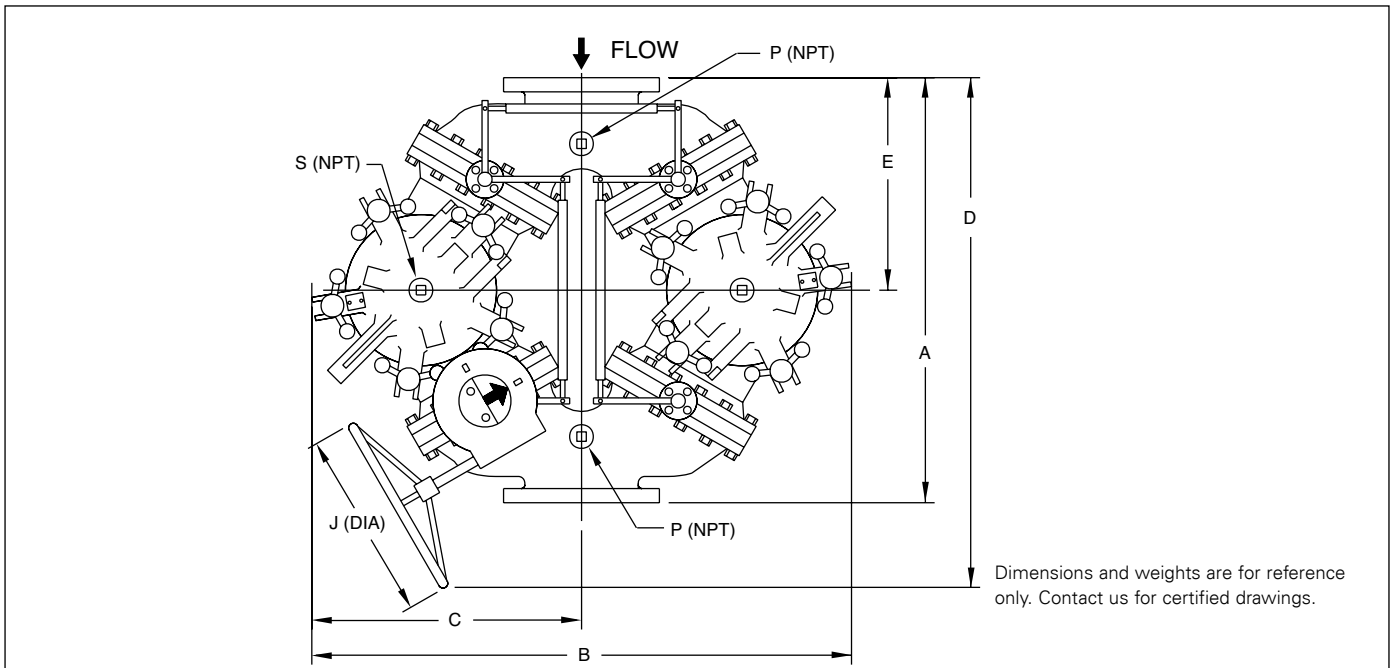
Selection Chart

| Size | Material | End Connection | Seals | Pressure Rating |
|------------|----------|----------------|--------|-----------------|
| 10" to 12" | Iron | Flanged 125# | Buna N | 200 psi @ 100°F |
| 10" to 12" | Bronze | Flanged 150# | Buna N | 200 psi @ 100°F |
| 14" to 18" | Iron | Flanged 125# | Buna N | 150 psi @ 100°F |
| 14" to 18" | Bronze | Flanged 150# | Buna N | 150 psi @ 100 |

C_v Factors*

| Size | Value | Size | Value |
|------|-------|------|-------|
| 10" | 1300 | 16" | 3400 |
| 12" | 2000 | 18" | 4900 |
| 14" | 2900 | | |

* For water with clean, perforated basket

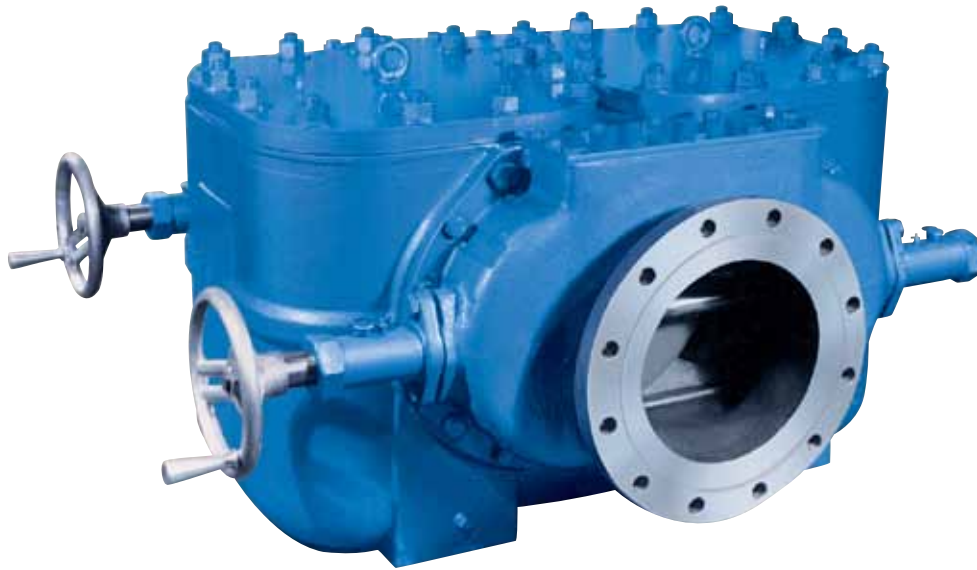


Dimensions (in/mm)

| Pipe Size | Dimensions (in/mm) | | | | | | | | | | | | | | | | | Wt (lb / kg) | |
|-----------|--------------------|------------|-----------|------------|---------------|-----------|------------|----------------|-----------|----------------|----------------|------------|-------------|-----------|---------|---------|----------|--------------|--------------|
| | A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | Iron | Bronze |
| 10 | 45 1143 | 51 1295 | 26 660 | 52 1321 | 22-1/2 572 | 19 483 | 32 813 | 30-1/4 768 | 18 457 | 12-3/16 310 | 29 737 | 49 1245 | 1-1/2 50 | 1/2 20 | 1 32 | 1 32 | 1/4 — | 1600 727 | 2003 910 |
| 12 | 62 1574 | 64 1626 | 32 813 | 66 1676 | 31 787 | 23 584 | 41 1041 | 36-5/8 924 | 16 406 | 16-3/4 425 | 38 965 | 66 1676 | 1-1/2 50 | 1/2 20 | 1 32 | 1 32 | 1/4 — | 2650 1205 | 3318 1508 |
| 14 | 72 1829 | 76 1930 | 38 965 | 79 2007 | 35-1/2 902 | 27 686 | 48 1219 | 44-3/4 1137 | 24 610 | 18-3/4 476 | 44-1/2 1130 | 77 196 | 1-1/2 50 | 1/2 20 | 1 32 | 1 32 | 1/4 — | 4300 1955 | 5384 2447 |
| 16 | 72 1829 | 76 1930 | 38 965 | 79 2007 | 35-1/2 902 | 27 686 | 48 1219 | 44-3/4 1137 | 24 610 | 18-3/4 476 | 44-1/2 1130 | 77 196 | 1-1/2 50 | 1/2 20 | 1 32 | 1 32 | 1/4 — | 4400 2000 | 5509 2504 |
| 18 | 72 1829 | 76 1930 | 38 965 | 79 2007 | 35-1/2 902 | 27 686 | 48 1219 | 44-3/4 1137 | 24 610 | 18-3/4 476 | 44-1/2 1130 | 77 196 | 1-1/2 50 | 1/2 20 | 1 32 | 1 32 | 1/4 — | 4600 2087 | — |

Model 570 Multi-Basket Duplex Strainer

8" to 24" • Iron or Carbon Steel • Flanged



FEATURES

- Continuous flow—no shutdown for basket cleaning
- Sliding gate design
- Eight baskets per strainer (four per side)
- Bolted cover
- Compact
- Threaded drain
- Perforated or mesh stainless steel baskets standard
- Synchronized chain drive
- Pressure equalization assembly

OPTIONS

- Bronze or stainless steel construction
- Basket perforations from 1/32" to 1/2"
- Basket mesh: 20, 40, 60, 80, 100, 150
- Monel baskets
- Drain valves
- Cover lift davit
- Pressure differential gauge and switch connections
- Basket flange gaskets
- Magnetic basket inserts
- Left hand drive

The Eaton Model 570 Duplex Basket Strainer has been specifically designed to remove potential damage causing particles from large volumes of water and other process media (up to 30,000 gpm) efficiently and cost effectively. The strainer operates continuously and the pipeline flow never has to be shut down for strainer basket cleaning.

Flow is switched from one basket chamber to the other by a sliding gate mechanism operated by hand wheels. The free floating valve disc mechanism moves easily and does not bind. The valve operating stem is fully enclosed, protecting it from the fluid flow.

The Model 570 is a multi-basket strainer, providing four baskets in each of the two straining chambers for a total of eight per duplex strainer. This makes the Model 570 a very compact unit for its size with a low profile—ideal for tight installations where space is a problem. And even if space is not a problem, why use a strainer that takes up more valuable floor space than is necessary?

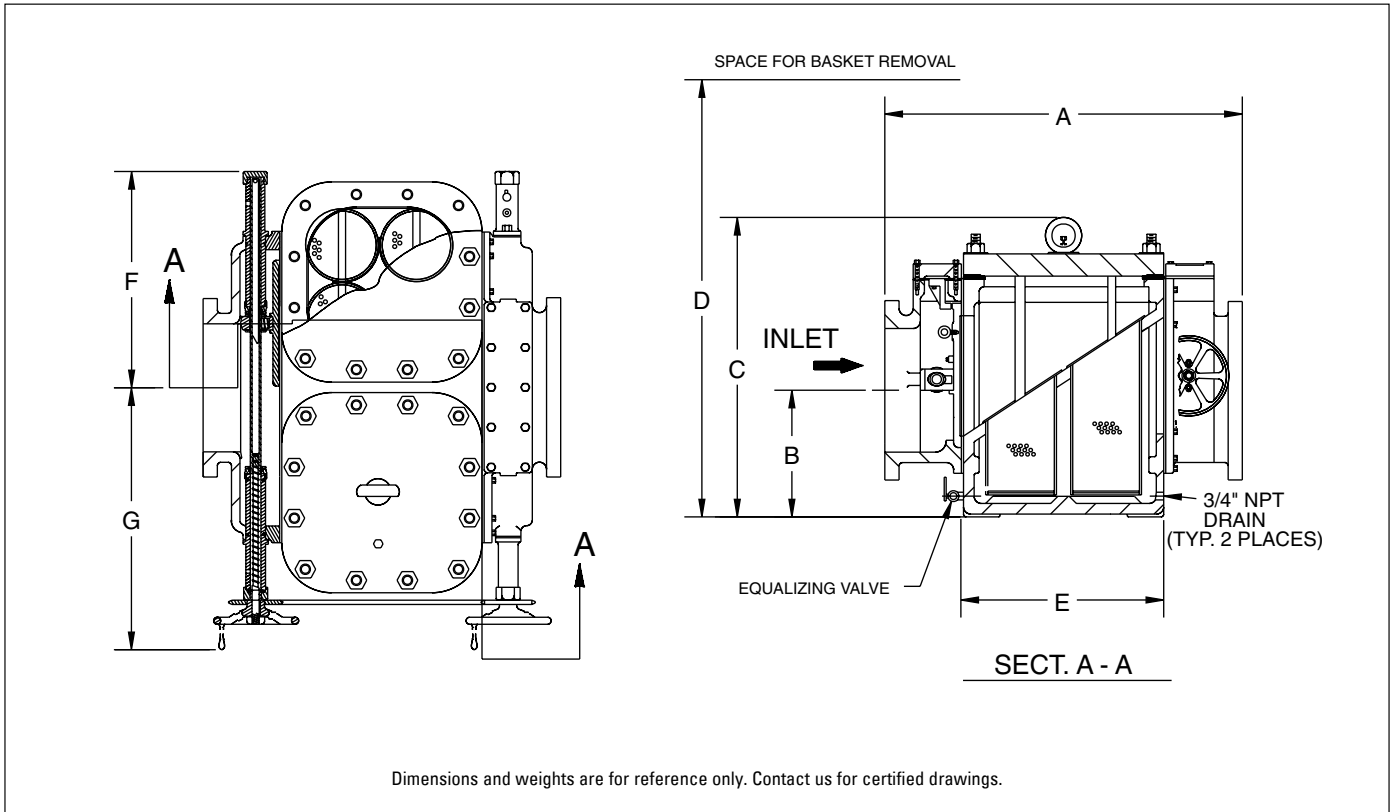
Because of the multi-basket design, the individual baskets are smaller and lighter than would be possible with just a single basket. A single

person can remove and clean the baskets easily and rapidly. Lifting tackle is not needed to remove the baskets from the strainer housing. The baskets feature a unique, angled top to permit direct fluid entry that contributes to the strainers low pressure drop. Because of the large open area ratio in the baskets, they have an unusually high dirt holding capacity—which results in a longer cycle between basket cleaning. Over time the savings in labor and downtime for basket cleaning will be considerable.

The Model 570 design has stood the test of time...over 60 years. They have long been used by the electric power industry and the primary metals industry for cleaning cooling water. They have long been the duplex strainers of choice in the paper, sewage, water treatment and chemical process industries for straining water and protecting equipment.

All over the world, in dozens of different industries moving large volumes of liquid, you'll find the Eaton Model 570 protecting equipment or improving the quality of the process media.

Model 570 Multi-Basket Duplex Strainer



Dimensions (in/mm)

| Pipe Size | A | B | C | D | E | F | G | Weight—Iron Weight—Carbon Steel | |
|-----------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|---------------------------------|--------------|
| | | | | | | | | lb / kg | lb / kg |
| 8 / 200 | 38.50 / 978 | 8.25 / 210 | 20.50 / 521 | 38.00 / 965 | 18.25 / 464 | 18.00 / 457 | 28.50 / 724 | 1410 / 641 | 1565 / 711 |
| 10 / 250 | 40.50 / 1029 | 10.38 / 264 | 23.75 / 603 | 44.00 / 1118 | 20.50 / 521 | 20.25 / 514 | 30.5- / 775 | 1880 / 855 | 2087 / 949 |
| 12 / 300 | 43.50 / 1105 | 13.50 / 343 | 29.25 / 743 | 52.00 / 1321 | 23.00 / 584 | 23.38 / 594 | 32.50 / 826 | 2604 / 1184 | 2890 / 1314 |
| 14 / 350 | 46.25 / 1175 | 15.75 / 400 | 31.63 / 803 | 60.00 / 1524 | 24.88 / 632 | 25.56 / 649 | 35.00 / 889 | 3006 / 1366 | 3337 / 1517 |
| 16 / 400 | 49.63 / 1261 | 17.81 / 458 | 35.00 / 889 | 66.00 / 1676 | 28.13 / 715 | 27.75 / 705 | 37.50 / 953 | 4350 / 1977 | 4826 / 2197 |
| 20 / 500 | 64.00 / 1626 | 26.63 / 676 | 45.75 / 1162 | 88.00 / 2235 | 33.75 / 857 | 34.00 / 864 | 43.75 / 1111 | 10000 / 4545 | 11100 / 5045 |
| 24 / 800 | 67.75 / 1721 | 29.50 / 749 | 53.00 / 1346 | 98.00 / 2489 | 36.63 / 930 | 40.38 / 1026 | 49.50 / 1257 | 11440 / 5200 | 12698 / 5772 |

Selection Chart

| Size | Material | End Connection | Gaskets | Pressure Rating |
|-----------|--------------|----------------|--------------|-----------------|
| 8" to 24" | Iron | Flanged 125# | Non-Asbestos | 125 psi @ 100°F |
| 8" to 24" | Carbon Steel | Flanged 150# | Non-Asbestos | 175 psi @ 100°F |
| 8" to 16" | Carbon Steel | Flanged 300# | Non-Asbestos | 300 psi @ 100°F |

DIN flanges available

Cv Factors*

| Size | Value |
|------|-------|
| 8" | 700 |
| 10" | 1250 |
| 12" | 1600 |
| 14" | 2000 |
| 16" | 2500 |
| 20" | 3600 |
| 24" | 5200 |

* For water with clean, perforated basket



Heavy duty strainer basket has metal banding spot welded at top and middle to provide extra support for difficult applications.

Taps

1/4" NPT cover vent taps and inlet/outlet nozzle taps are available for most strainers.

Cover Vent Valves

Available in brass or stainless steel, needle type valves mount on the cover of the strainer with a 1/4" NPT tap. These valves are rated for 200 psi at 100°F.

Drain Valves

These ball type valves are used to drain the strainer housing. Available in brass or stainless steel, they are rated at 600 psi at 100°F with either 1/4" or 1/2" NPT connections.

Heavy Duty Strainer Baskets

For very demanding applications, heavy-duty-construction baskets are extremely rugged and stand up to the most abusive applications.

Elastomer Seals

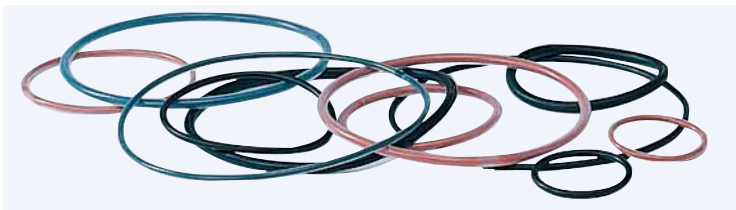
If the standard seals on an Eaton strainer are not suitable for a specific application, a variety of special seals are offered which include: EPDM, Viton®, Buna-N and TFE-encapsulated.

Differential Pressure Gauge

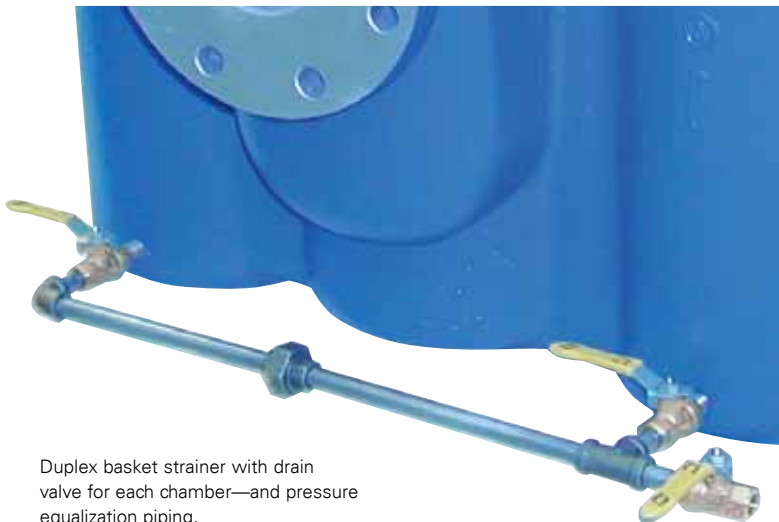
This gauge shows the pressure differential across the strainer and is an aid in determining when to change out the strainer basket. It has a 0–30 psid pressure range and features a 3-1/2" gauge face. Rated at 3000 psi, it comes with a 1/4" NPT connection in either brass or stainless steel.

Differential Pressure Gauge with Switch

This is the standard Eaton differential pressure gauge described above, except that double pole, double throw relay contacts are included to permit actuation of a remote electrical signaling device such as a light on a control panel when a predetermined differential pressure is reached. Contact rating is 10 A/115 V/60 Hz.



Elastomer seals are available in a variety of materials.



Duplex basket strainer with drain valve for each chamber—and pressure equalization piping.



Typical pressure differential gauge with switch.

Temporary Strainers

2" to 24" • Flanged • Stainless Steel and Monel



Cone Type

Basket Type

FEATURES

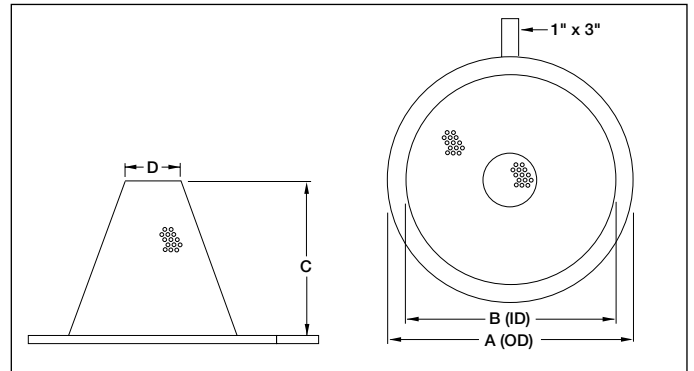
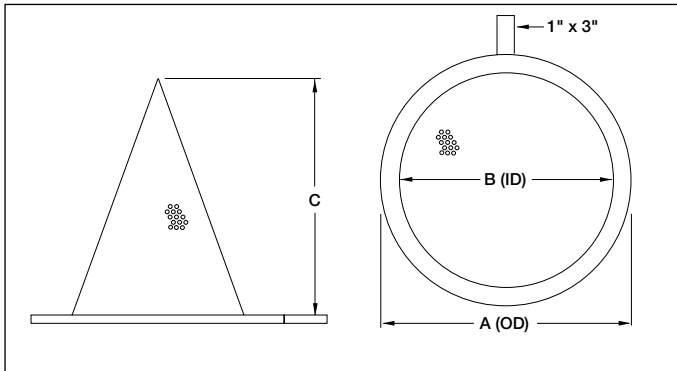
- ANSI Classes 150, 300 and 600
- Perforations: 1/32" to 1/2" diameter
- Mesh Liners: 20, 40, 60, 80 and 100 (best with basket type strainers)
- Stainless steel or Monel construction

OPTIONS

- Alloy construction, RTJ-style connections

DESIGNED FOR USE IN:

- New pipeline start-up service
- Line flushing after any modification work



Dimensions (inches) Model 92 Cone Type

| Pipe Size | A Class 150 | A Class 300 | A Class 600 | B | C |
|-----------|-------------|-------------|-------------|-------|------|
| 2 | 3.88 | 3.88 | 4.13 | 1.75 | 6.0 |
| 2-1/2 | 4.63 | 4.63 | 4.88 | 2.25 | 7.0 |
| 3 | 5.13 | 5.13 | 5.63 | 2.75 | 9.0 |
| 4 | 6.63 | 6.63 | 6.88 | 3.50 | 12.0 |
| 5 | 7.50 | 7.50 | 9.25 | 4.63 | 14.0 |
| 6 | 8.50 | 8.50 | 10.25 | 5.50 | 17.0 |
| 8 | 10.75 | 10.75 | 12.38 | 7.13 | 23.0 |
| 10 | 12.13 | 13.13 | 15.50 | 9.0 | 27.0 |
| 12 | 15.88 | 15.88 | 17.38 | 10.88 | 32.0 |
| 14 | 17.50 | 17.50 | 19.13 | 12.63 | 33.0 |
| 16 | 20.0 | 20.0 | 22.0 | 14.50 | 39.0 |
| 18 | 21.38 | 21.38 | 23.88 | 16.38 | 44.0 |
| 20 | 23.63 | 23.63 | 26.63 | 18.38 | 49.0 |
| 24 | 28.0 | 28.0 | 30.88 | 20.38 | 58.0 |

Dimensions (inches) Model 92 Basket Type

| A Pipe Size | A Class 150 | A Class 300 | Class 600 | B | C | D |
|-------------|-------------|-------------|-----------|-------|-------|------|
| 2 | 3.88 | 3.88 | 4.13 | 1.75 | 3.50 | 1.0 |
| 2-1/2 | 4.63 | 4.63 | 4.88 | 2.25 | 4.0 | 1.0 |
| 3 | 5.13 | 5.13 | 5.63 | 2.75 | 4.50 | 1.0 |
| 4 | 6.63 | 6.63 | 6.88 | 3.50 | 6.0 | 2.0 |
| 5 | 7.50 | 7.50 | 9.25 | 4.63 | 7.50 | 2.0 |
| 6 | 8.50 | 8.50 | 10.25 | 5.50 | 9.0 | 2.0 |
| 8 | 10.75 | 10.75 | 12.38 | 7.13 | 12.0 | 2.0 |
| 10 | 13.13 | 13.13 | 15.50 | 9.0 | 14.0 | 3.0 |
| 12 | 15.88 | 15.88 | 17.38 | 10.88 | 16.50 | 3.0 |
| 14 | 17.50 | 17.50 | 19.13 | 12.63 | 17.0 | 4.0 |
| 16 | 20.0 | 20.0 | 22.0 | 14.50 | 19.0 | 4.0 |
| 18 | 21.38 | 21.38 | 23.88 | 16.38 | 21.0 | 6.0 |
| 20 | 23.63 | 23.63 | 26.63 | 18.38 | 24.0 | 6.0 |
| 24 | 28.0 | 28.0 | 30.88 | 22.38 | 28.0 | 10.0 |

Basket & Screen Data



Cylindrical baskets for simplex and duplex strainers up to 8" size



Slant top baskets for Model 510 simplex and Model 570 duplex strainers sizes 8" to 36"

Basket and Screen Design

The basket or screen is the heart of an Eaton Strainer and is designed to be both effective and durable to perform its function correctly. Eaton supplies baskets and strainers in both standard and heavy-duty designs. Standard design baskets meet the needs of most applications. The heavy-duty design is used most often in applications with higher viscosity liquids.

Eaton Baskets and screens are available in two standard materials: 1) Type 316 stainless steel and 2) Monel. These materials cover nearly all corrosion resistance levels needed in strainer services. A wide range of perforations and mesh provides removal of solids from 1/2" down to as low as 40 micron. For special, unique applications Eaton can custom fabricate a basket from just about any material to your exact specifications.

Basket Construction

Each style basket includes a perforated sheet which is induction welded to a rigid top ring and solid bottom cap. Special attention is paid to the welds along the perforated sheet seam to prevent the possible bypass of solids and to maintain the basket's strength. A handle is then welded to the I.D. of the top ring to facilitate easy removal. Heavy duty baskets have reinforcing strips induction welded along the perforation's seam and circumferentially on the outside of the mid-section of the basket. The perforated sheet is placed inside the top ring and bottom cap as well.

Screen Construction

Y strainer screens are rolled to form a perfect cylinder and are induction welded along the seam. A neat weld must be applied along the perforated sheet seam to prevent the possible bypass of solids and to provide a seam of acceptable strength. Eaton Y-Strainer screen seats are machined to specific dimensions and, accordingly, both the O.D. and length of these screens are closely tolerated.

Perforated Sheet— Specification

All Eaton baskets and screens are made of perforated sheet. The percentage of open area of a screen generally dictates the internal pressure drop that will be experienced across it. Other factors, though, must be taken into consideration to produce a screen that will provide a reasonable service life. The objective is to select a perforation with the best balance of open area, hole arrangement and sheet thickness.

Eaton baskets are made using perforated sheet with round holes because of its greater inherent strength and resistance to stress cracking.



Pleated basket for Model 72 simplex and Model 50 duplex strainers sizes 10" to 18"

Open Area

Perforated sheet can have an open area from 15% to 75%. In general, the larger the open area of perforated sheet, the thinner the sheet thickness must be. As holes are punched closer together to increase the perforated open area, the solid portion between holes distorts and becomes weak. Table A on page 27 describes the sheet thickness which is used to construct baskets and screens.

Another factor in controlling the sheet thickness is the hole diameter. The smaller the hole diameter, the thinner the sheet. The rule of thumb used by commercial perforated sheet manufacturers is that hole dimensions smaller than the plate thickness are impractical and costly to manufacture. Eaton baskets and screens have between 28% to 63% open area with gauge thickness from 18 (0.048") to 25 (0.021"), depending upon the size of the perforations and the size and model of the strainer.

Hole Arrangement

Holes can be punched in a straight line or in a staggered pattern. Eaton baskets and screens have a staggered pattern which increases the open area, provides extra strength and creates less pressure drop.

Perforations

Eaton baskets and screens are available in 1/32", 3/64", 1/16", 1/8", 5/32", 1/4", 3/8" and 1/2" perforations and in mesh sizes: 20, 40, 60, 80, 100, 200 and 325. However, over many years we have found that for general service there is one perforation for each size and type of strainer which is most popular. This is called the standard perforation and is the size furnished with the strainer unless another perforation is specified.

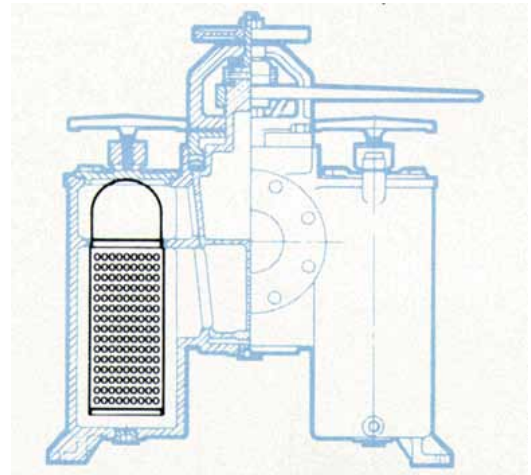
Wire Mesh Specifications

All Eaton strainers are available with woven wire mesh screens. Wire mesh provides smaller openings than can be obtained by perforating for very fine straining applications ...down to 40 micron.

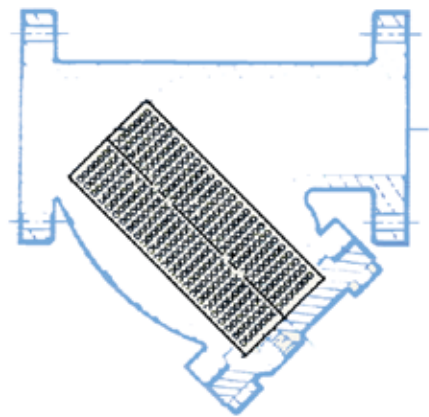
Woven mesh is constructed similarly to fabric and is woven on machines like those used in the textile industry.

Eaton baskets and screens are made using monofilament mesh having equal wire size and wire count in both directions to produce square openings. Other types of mesh such as Dutch (or Hollander) are also available. Dutch weave has a greater quantity of wires in one direction and fewer wires of a larger diameter in the other direction. This creates a rectangular opening. As with perforated sheet, the best wire mesh selection is a balance of open area, wire diameter and type of weave.

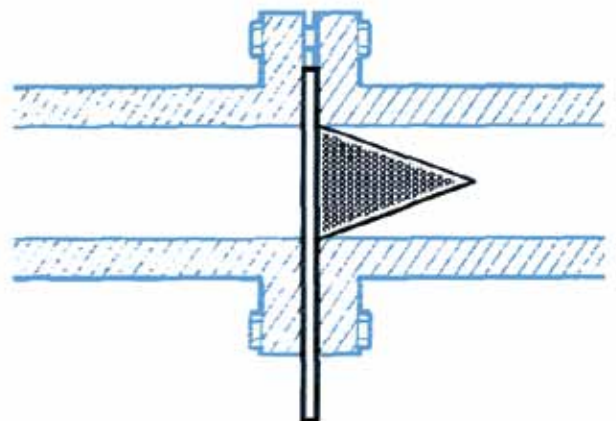
We have standardized certain mesh sizes based on past experience which we feel will provide the best strainer operation and longest life.



Partial cutaway of plug type duplex strainer showing basket in position

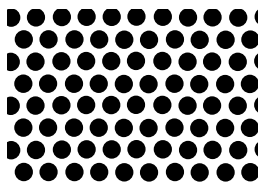


Cutaway of Y strainer shows strainer screen in position

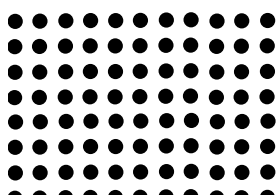


Cone type temporary strainer is shown bolted between two pipe flanges

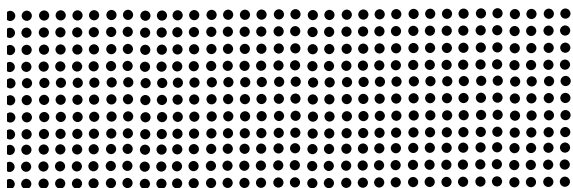
Pattern Examples



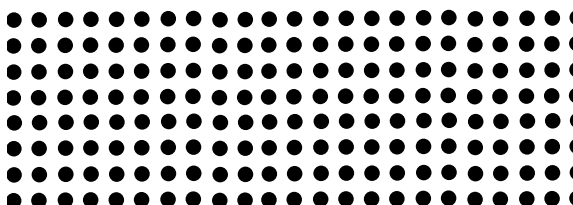
Staggered Holes



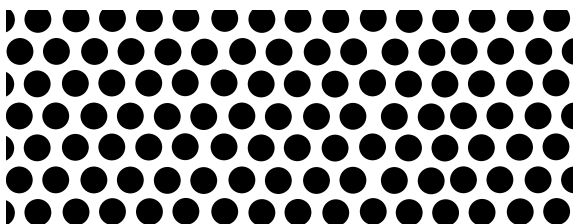
Straight Holes



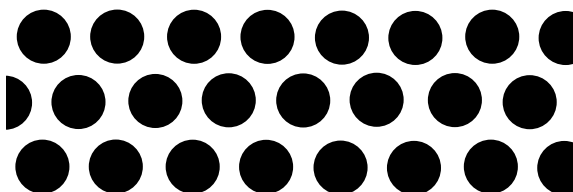
1/32" – Actual Size



1/16" – Actual Size



1/8" – Actual Size



1/4" – Actual Size



Magnetic strainer element captures microscopic iron and steel particles

Openings

Standard wire mesh liners for Eaton baskets and screens are available from 20 mesh to 400 mesh. For any size mesh, there are several different open area selections based

on the diameter of the wires used. Twenty mesh means 20 wires per inch in both a vertical and horizontal direction. Therefore, as the wire size increases, the hole size decreases. Eaton baskets offer wire mesh with openings from 0.034" to 0.0015" (20 mesh to 400 mesh).

Open Area

The open area of wire mesh is a function of both the weave and the wire diameter. Eaton uses a plain square weave in most cases because its straight-through flow path creates the least pressure drop. In almost all cases, the mesh is reinforced with a perforated metal backing having greater than a 60% open area. This combination affords the greatest degree of strength, yet offers a lower pressure drop than other types of wire mesh.

In certain instances, such as Y strainer in steam applications, the increased pressure drop resulting from the use of a Dutch weave is not as critical as the retention of small particles. Therefore, in applications which involve steam, Eaton suggests the use of weave such as the 30 x 160 size which can withstand a much higher differential pressure without bursting. Eaton can supply baskets and screens having open areas from 14% to 46%.

Plain Square Weave

Woven in an over and under pattern of wire having the same diameter. This weave produces a square opening having excellent flow characteristics.

Plain Dutch Weave

Woven in an over and under pattern in one direction where the horizontal wires are larger in diameter than the vertical wires which are driven close and crimped at each pass.

This weave produces greater strength, but lower flow rates than a square weave. Most often used in steam applications.

Mesh Liners Available

The size of mesh liners is determined by the number of openings per linear inch. The standard sizes Eaton can furnish are 20, 40, 60, 80, 100, 200, 325 and 400.

Magnetic Inserts

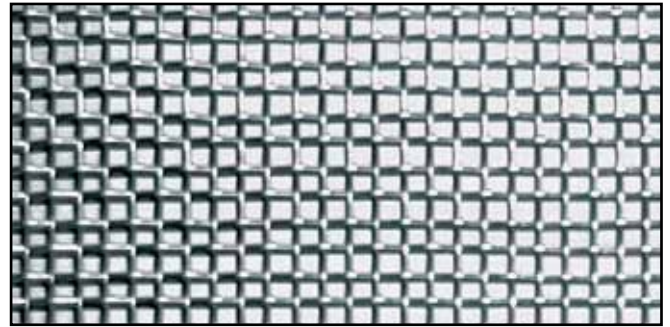
Although a mesh lined Eaton strainer basket will catch and remove very small unwanted particles (down to 400 mesh), there are applications where microscopic iron or steel particles are present in the fluid. Being so tiny they will often pass through the finest mesh screen. The problem is particularly prevalent whenever there is wear of iron or steel parts against each other in the system. Examples are cooling or lubricating lines to bearings, liquids being processed on rolls or roller mills such as paint or ink, and any material passing through a gear system.

A simple, cost effective way to remove these damage-causing particles is to install magnetic inserts in the Eaton strainer basket. All the fluid passes over the powerful magnets which catch those fine steel or iron particles which might otherwise pass through the mesh lining of the basket. The magnets are Alnico, guaranteed to retain their magnetism indefinitely, and so powerful they will hold metal several times their own weight. They are completely encased and sealed in a 1/8" thick type 316 stainless steel shell—thus assuring freedom from contamination or corrosion.

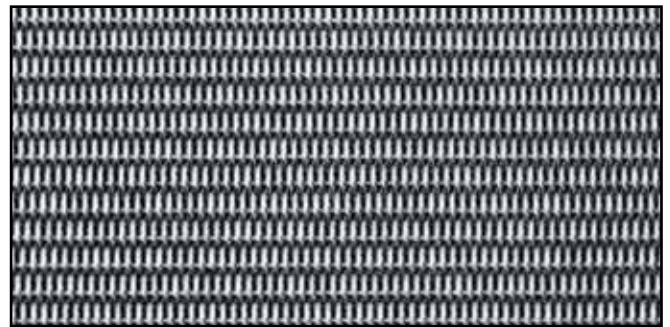
Wire Mesh Weaves

Table A. Perforated Basket Sheet Specifications

| Perforation Size Inches | Sheet Thickness USS Gauge # | Hole Pattern | % Open Area |
|-------------------------|-----------------------------|--------------|-------------|
| 0.020 | 26 | Straight | 16.0 |
| 1/32 | 26 | Straight | 28.0 |
| 3/64 | 24 | Straight | 30.2 |
| 0.045 | 26 | Staggered | 36.0 |
| 1/16 | 26 | Straight | 31.0 |
| 1/8 | 26 | Staggered | 47.9 |
| 5/32 | 26 | Staggered | 63.0 |
| 1/4 | 26 | Staggered | 42.0 |
| 3/8 | 26 | Staggered | 52.0 |
| 1/2 | 26 | Staggered | 47.9 |



Plain Square Weave

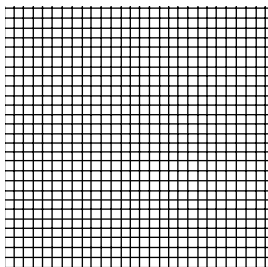


Plain Dutch Weave

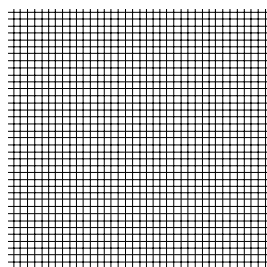
Table B. Mesh Basket Sheet Specifications

| Mesh Size | Wire Diameter Inches | Mesh Opening Inches | Mesh Opening Microns | % Open Area |
|-----------|----------------------|---------------------|----------------------|-------------|
| 20 | 0.016 | 0.0340 | 864 | 46.2 |
| 40 | 0.010 | 0.0150 | 381 | 36.0 |
| 60 | 0.0075 | 0.0092 | 234 | 30.5 |
| 80 | 0.0060 | 0.0065 | 165 | 27.0 |
| 100 | 0.0045 | 0.0055 | 140 | 30.3 |
| 200 | 0.0021 | 0.0029 | 74 | 33.6 |
| 325 | 0.0014 | 0.0017 | 43 | 30.0 |
| 400 | 0.0015 | 0.0381 | 38 | 36.0 |

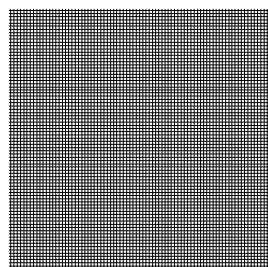
Mesh Liners



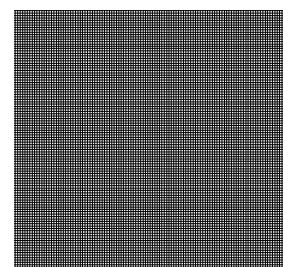
20 Mesh



40 Mesh



60 Mesh



80 Mesh

Basket Effective Area

| Strainer Model | Pipe Size | Perforation Size | Nominal Area of Pipe (sq in) | Gross Screen Area (sq in) | Free Area (sq in) | Ratio Free Area to Pipe Area |
|----------------|-----------|------------------|------------------------------|---------------------------|-------------------|------------------------------|
| 30R | 1-1/2 | 5/32 | 2.03 | 35.4 | 22.3 | 11.0 |
| 30R | 2 | 5/32 | 3.35 | 50.9 | 32.1 | 9.6 |
| 30R | 2-1/2 | 5/32 | 4.78 | 84.7 | 53.4 | 11.2 |
| 30R | 3 | 5/32 | 7.39 | 84.7 | 53.4 | 7.2 |
| 30R | 4 | 5/32 | 12.73 | 114.5 | 72.1 | 5.6 |
| 30 | 5 | 5/32 | 20.0 | 158.1 | 99.6 | 5.0 |
| 30R | 6 | 5/32 | 28.9 | 180.9 | 113.9 | 4.0 |
| 30R | 8 | 5/32 | 50.03 | 275.6 | 171.8 | 3.4 |
| 50 | 3/4 | 1/32 | 0.53 | 19.5 | 5.2 | 9.8 |
| 50 | 1 | 1/32 | 0.86 | 19.5 | 5.2 | 6.1 |
| 50 | 1-1/4 | 1/8 | 1.49 | 39.7 | 19.0 | 12.8 |
| 50 | 1-1/2 | 1/8 | 2.03 | 39.7 | 19.0 | 9.4 |
| 50 | 2 | 1/8 | 3.35 | 64.0 | 30.7 | 9.2 |
| 50 | 2-1/2 | 1/8 | 4.78 | 64.0 | 30.7 | 6.4 |
| 50 | 3 | 3/16 | 7.39 | 85.6 | 42.8 | 5.8 |
| 50 | 4 | 3/16 | 12.73 | 146.1 | 73.0 | 5.7 |
| 50 | 5 | 3/16 | 20.0 | 216.1 | 106.0 | 5.4 |
| 50 | 6 | 3/16 | 28.9 | 265.4 | 132.7 | 4.6 |
| 50 | 8 | 3/16 | 50.02 | 506.7 | 253.4 | 5.1 |
| 50 | 10 | 3/16 | 78.8 | 800 | 400 | 5.1 |
| 50 | 12 | 3/16 | 113.1 | 1200 | 600 | 5.3 |
| 50 | 14 | 3/16 | 137.9 | 2000 | 1000 | 7.3 |
| 50 | 16 | 3/16 | 182.6 | 2000 | 1000 | 5.5 |
| 50 | 18 | 3/16 | 182.6 | 2000 | 1000 | 5.5 |
| 53BTX | 3/4 | 1/32 | 0.53 | 19.8 | 5.5 | 10.4 |
| 53BTX | 1 | 1/32 | 0.86 | 19.8 | 5.5 | 6.4 |
| 53BTX | 1-1/4 | 1/8 | 1.49 | 45.0 | 22.0 | 14.4 |
| 53BTX | 1-1/2 | 1/8 | 2.03 | 45.0 | 22.0 | 10.6 |
| 53BTX | 2 | 1/8 | 3.35 | 65.0 | 31.0 | 9.3 |
| 53BTX | 2-1/2 | 1/8 | 4.78 | 65.0 | 31.0 | 6.5 |
| 53BTX | 3 | 3/16 | 7.39 | 110.3 | 55.1 | 7.4 |
| 53BTX | 4 | 3/16 | 12.73 | 152.0 | 76.0 | 5.9 |
| 72 | 3/8 | 1/32 | 0.19 | 12.7 | 3.4 | 18.0 |
| 72 | 1/2 | 1/32 | 0.30 | 12.7 | 3.4 | 11.3 |
| 72 | 3/4 | 1/32 | 0.53 | 19.5 | 5.2 | 9.9 |
| 72 | 1 | 1/32 | 0.86 | 19.5 | 5.2 | 6.1 |
| 72 | 1-1/4 | 1/8 | 1.49 | 30.1 | 14.4 | 9.7 |
| 72 | 1-1/2 | 1/8 | 2.03 | 49.7 | 19.0 | 9.4 |
| 72 | 2 | 1/8 | 3.35 | 50.9 | 24.4 | 7.3 |
| 72 | 2-1/2 | 1/8 | 4.78 | 80.2 | 38.4 | 8.0 |
| 72 | 3 | 3/16 | 7.39 | 114.5 | 57.2 | 7.8 |
| 72 | 4 | 3/16 | 12.73 | 168.3 | 84.1 | 6.6 |
| 72 | 5 | 3/16 | 20.0 | 265.4 | 132.7 | 6.6 |
| 72 | 6 | 3/16 | 28.9 | 324.2 | 162.1 | 5.6 |
| 72 | 8 | 3/16 | 50.02 | 555.3 | 277.7 | 5.6 |
| 72 | 10 | 3/16 | 78.8 | 800 | 400 | 5.1 |
| 72 | 12 | 3/16 | 113.1 | 1200 | 600 | 5.3 |
| 72 | 14 | 3/16 | 137.9 | 2000 | 1000 | 7.3 |
| 72 | 16 | 3/16 | 182.6 | 2000 | 1000 | 5.5 |
| 72 | 18 | 3/16 | 182.6 | 2000 | 1000 | 5.5 |

Pressure Drop Calculations

Pressure Loss Calculation Using C_V Factor Example

For Simplex and Duplex Strainers

In the following pages, pressure drops for Eaton strainers are shown. The curves are based on the flow of water through clean, perforated baskets or screens.

For mesh-lined baskets or screens and/or for fluids other than water, use the correction factors listed on this page.

To accurately calculate the pressure loss for filters and strainers in a pipeline, proceed as follows:

1. First calculate pressure loss using C_V factor formula at right.
2. Take the pressure loss figure obtained in (1) and recalculate it using the appropriate correction factor from the following table.

Standard Units

$$\Delta P = \left[\frac{Q}{C_V} \right]^2$$

ΔP = Pressure Drop in psi
 Q = Flow in gpm
 C_V = Flow Coefficient

Metric Units

$$\Delta P = \left[\frac{Q}{C_V} \right]^2 (133.6)$$

ΔP = Pressure Drop in kPa
 Q = Flow in M³/hr
 C_V = Flow Coefficient

The pressure loss across a strainer can be calculated using the system's flow rate and the C_V factor for that strainer.

For example, a 1" Model 72 simplex strainer with a perforated basket has a C_V factor of 22.5. In water service with a 30 gpm flow rate, it will have a 1.7 psi pressure drop $(30 \div 22.5)^2 = 1.7$. For mesh-lined baskets and/or fluids with a viscosity greater than water, multiply the pressure drop by the correction factors in the chart "Correction Factors for Mesh-Lined Baskets."

Correction Factors for Mesh-Lined Baskets

First – Multiply the pressure drop for water shown in charts by the specific gravity of the liquid.

Second – Multiply the corrected pressure drop figure by the following correction factors for more viscous liquids. (Water has a viscosity of 30 SSU.)

| Viscosity (SSU) | Unlined Perforated Basket | 40 Mesh Lined Basket | 60 Mesh Lined Basket | 80 Mesh Lined Basket | 100 Mesh Lined Basket | 200 Mesh Lined Basket | 325 Mesh Lined Basket |
|-----------------|---------------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|
| 30 (water) | 0 | 1.2 | 1.4 | 1.6 | 1.7 | 2.0 | 2.5 |
| 500 | 1.6 | 1.9 | 2.1 | 2.4 | 2.6 | 3.1 | 3.6 |
| 1000 | 1.7 | 2.2 | 2.4 | 2.6 | 2.8 | 3.3 | 3.8 |
| 2000 | 1.9 | 2.4 | 2.7 | 2.9 | 3.2 | 3.8 | 4.0 |
| 3000 | 2.0 | 2.6 | 2.9 | 3.2 | 3.5 | 4.1 | 4.3 |
| 5000 | 2.2 | 3.0 | 3.5 | 4.0 | 4.5 | 5.3 | 6.3 |
| 10000 | 2.5 | 3.5 | 4.2 | 5.0 | 6.0 | 7.1 | 8.5 |

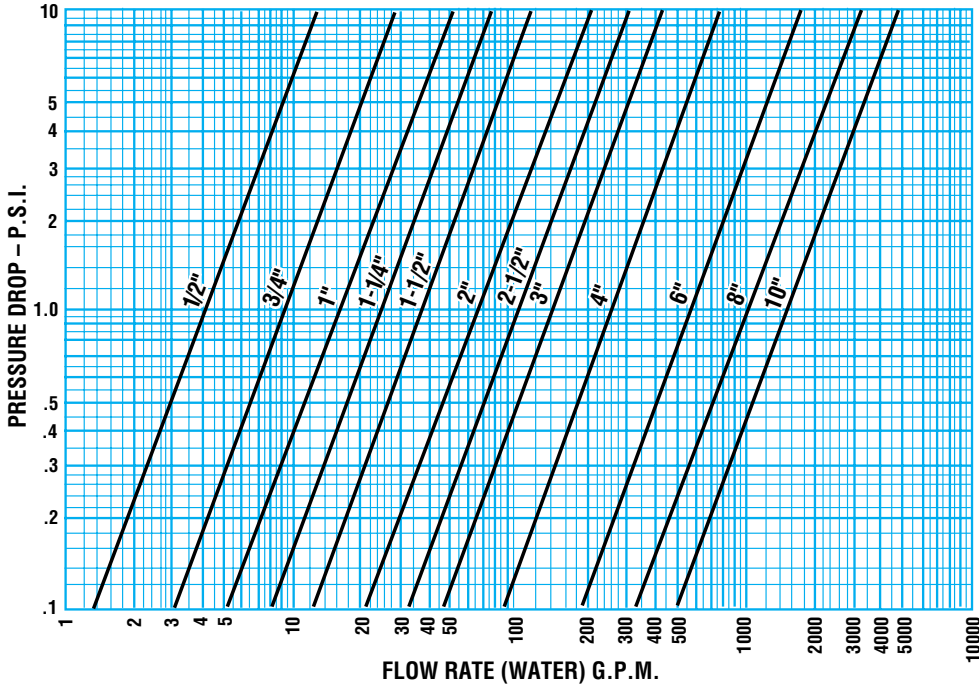
Strainer Basket Opening Equivalents

| Mesh | Inches | Millimeters | Microns |
|------|--------|-------------|---------|
| 400 | 0.0015 | 0.0381 | 38 |
| 300 | 0.0018 | 0.0457 | 45 |
| 250 | 0.0024 | 0.0609 | 60 |
| 200 | 0.0027 | 0.0686 | 68 |
| 150 | 0.0041 | 0.1041 | 104 |
| 100 | 0.0065 | 0.1651 | 165 |
| 80 | 0.007 | 0.1778 | 177 |
| 60 | 0.009 | 0.2286 | 228 |
| 40 | 0.015 | 0.8636 | 380 |
| 20 | 0.034 | 0.8636 | 862 |

| Perf | Inches | Millimeters | Microns |
|------|--------|-------------|---------|
| 1/32 | 0.033 | 0.838 | 838 |
| 3/64 | 0.045 | 1.143 | 1143 |
| 1/16 | 0.070 | 1.778 | 1776 |
| 3/32 | 0.094 | 2.387 | 2387 |
| 1/8 | 0.125 | 3.175 | 3175 |
| 5/32 | 0.150 | 3.810 | 3810 |
| 3/16 | 0.1875 | 4.762 | 4762 |
| 1/4 | 0.250 | 6.350 | 6350 |
| 3/8 | 0.375 | 9.525 | 9525 |
| 1/2 | 0.500 | 12.700 | 12700 |

Model 85 Y Strainer Pressure Drop Curves

Water Pressure Drops



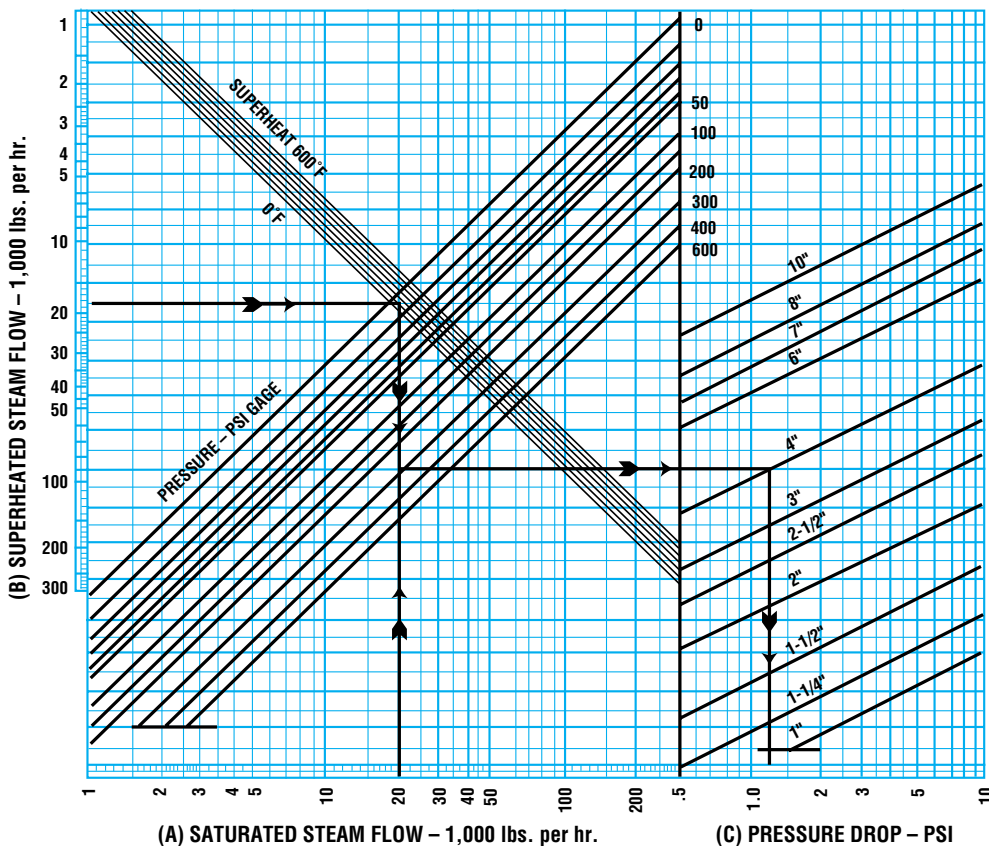
Calculating Saturated Steam Pressure Drop

Example:

Pressure = 300 psig
 Flow Rate = 20,000 lb/hr
 Strainer Size = 4 inches

1. Locate steam flow on Scale A.
2. Follow vertical line to required pressure rating.
3. Follow horizontal line to strainer size.
4. Follow vertical line downward and read pressure drop on Scale C.
5. Pressure drop equals 1.25 psi.

Steam Pressure Drops



Calculating Superheated Steam Pressure Drop

Example:

Pressure = 300 psig
 Flow Rate = 18,000 lb/hr
 Strainer Size = 4 inches

1. Locate steam flow on Scale B.
2. Follow horizontal line to superheat.
3. Follow vertical line to pressure.
4. Follow horizontal line to strainer size.
5. Follow vertical line downward and read pressure drop on Scale C.
6. Pressure drop equals 1.25 psi.

Note: Use the superheat temperature value above the saturated steam temperature to obtain the point on this graph.

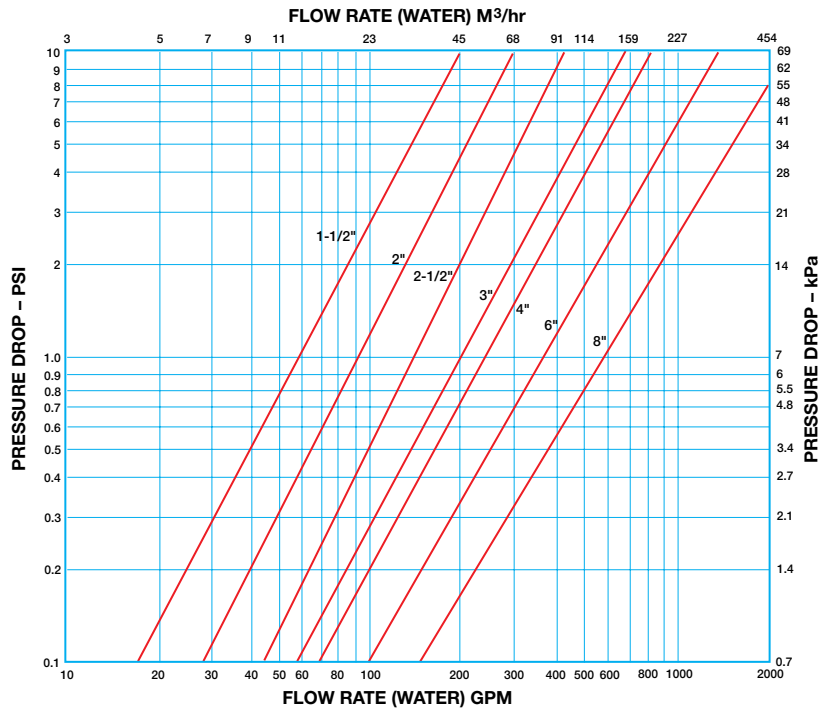
Consult Eaton for 12" and larger sizes.

Model 30 & 72 Pressure Drop Curves

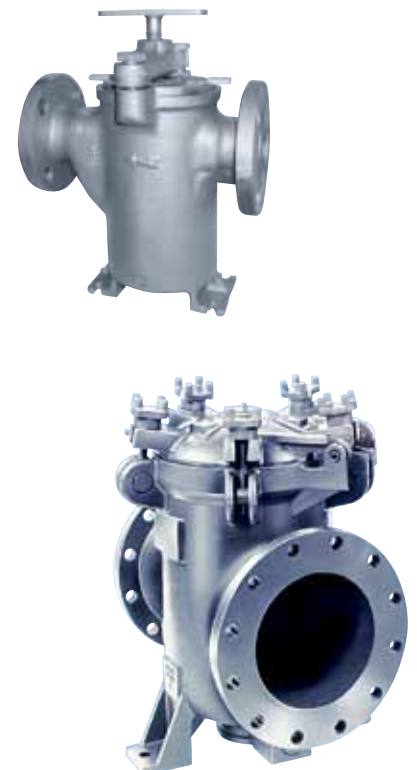
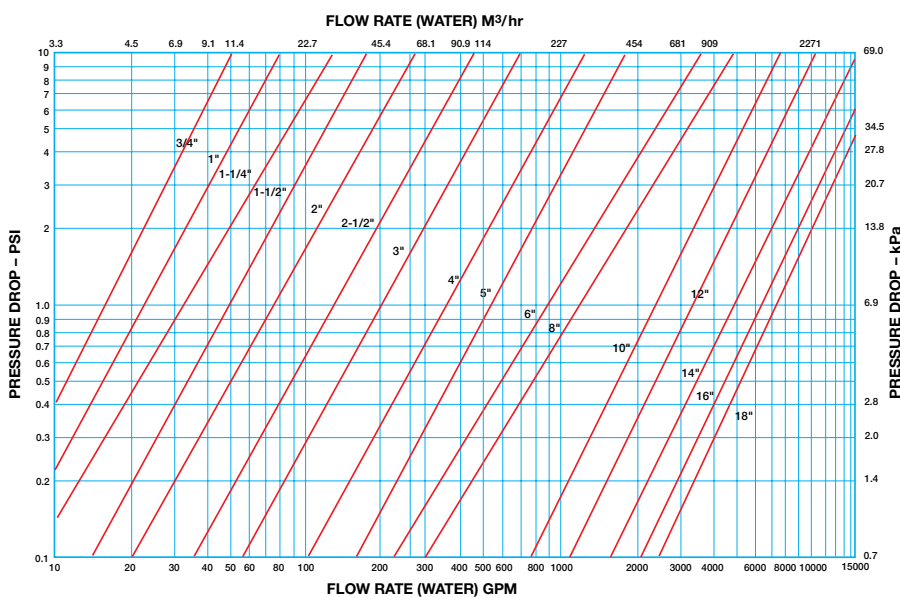
Pressure Drop vs Flow Rate

These curves are for clean baskets, without mesh liners—and with water flowing through the strainer. For mesh-lined baskets and/or for other fluids, you must first compute a correction factor. See Page 29 for full details.

Model 30R Simplex – 1-1/2" through 8"



Model 72 Simplex – 3/4" through 18"



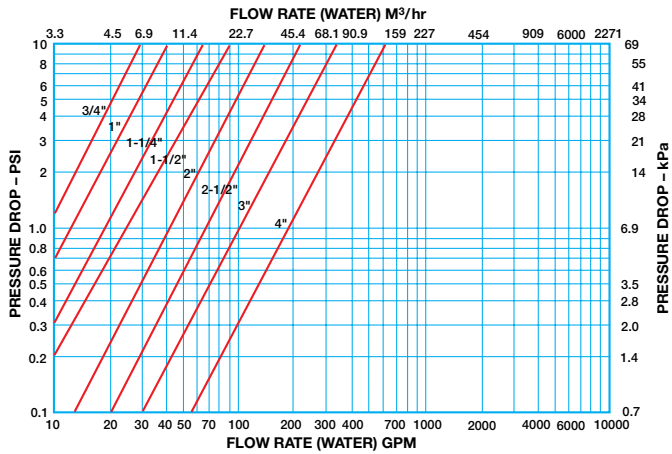
Model 53BTX & 50 Pressure Drop Curves

Pressure Drop vs Flow Rate

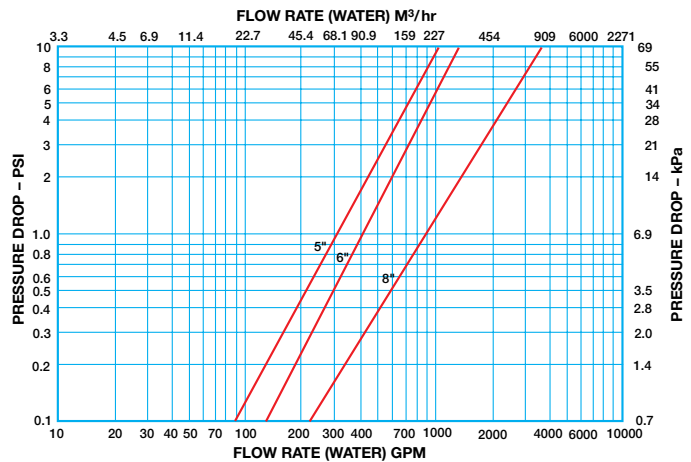
These curves are for clean baskets, without mesh liners—and with water flowing through the strainer.

For mesh-lined baskets and/or for other fluids, you must first compute a correction factor. See Page 29 for full details.

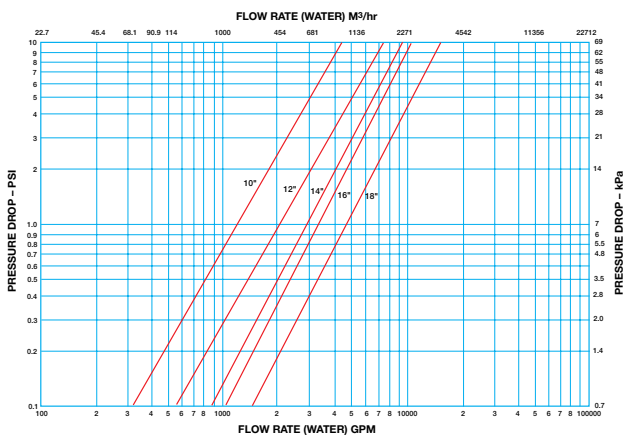
Model 53BTX Duplex – 3/4" Through 4"



Model 50 Duplex – 5" Through 8"



Model 50 Multi-Basket Duplex – 10" Through 18"



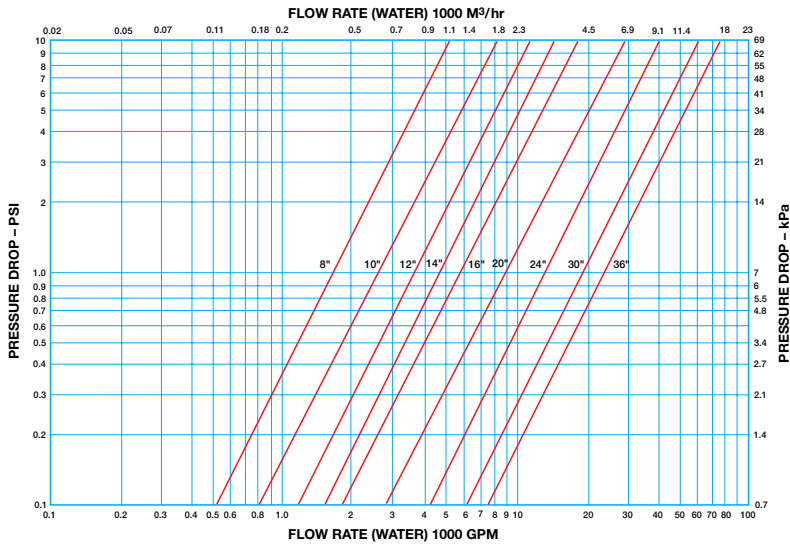
Model 510 & 570 Pressure Drop Curves

Pressure Drop vs Flow Rate

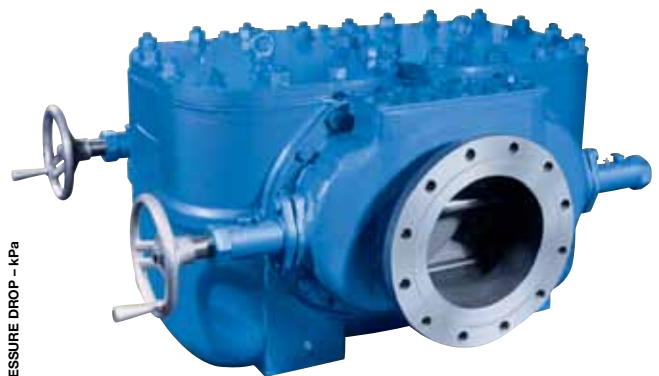
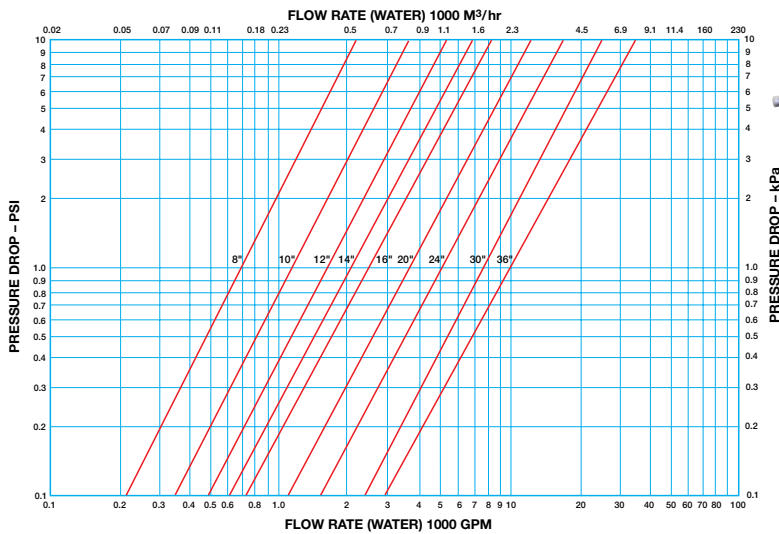
These curves are for clean baskets, without mesh liners—and with water flowing through the strainer.

For mesh-lined baskets and/or for other fluids, you must first compute a correction factor. See Page 29 for full details.

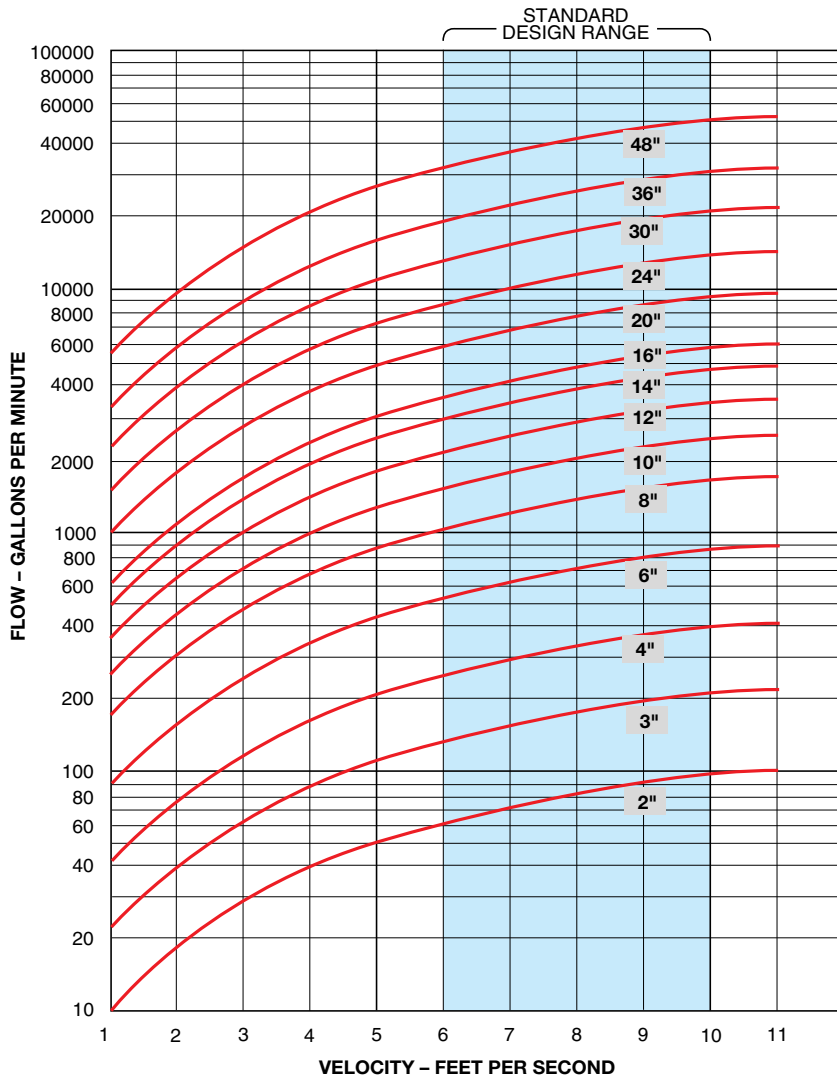
Model 510 Multi-basket Simplex – 8" through 36"



Model 570 Sliding Gate Duplex – 8" Through 36"



Strainer Sizing Chart



Metal Alloys used in Eaton Strainers

Carbon Steel – ASTM A-216 Grade WCB

Tensile Strength: 70,000 lb/sq in
 Yield: 36,000 lb/sq in
 Elongation: 22%
 Chemical Composition:
 C (Carbon) 0.30%
 Si (Silicon) 0.60%
 P (Phosphorus) 0.04%
 S (Sulfur) 0.045%
 Mn (Manganese) 1.00%
 Residual Elements 1.00% max

Aluminum Bronze – ASTM B-148 Grade C95400

Tensile Strength: 75,000 lb/sq in
 Yield: 30,000 lb/sq in
 Elongation: 12%
 Chemical Composition:
 Cu (Copper) 85%
 Fe (Iron) 4%
 Al (Aluminum) 11%

Stainless Steel – ASTM A-351 Grade CF8M

Tensile Strength: 70,000 lb/sq in
 Yield: 30,000 lb/sq in
 Elongation: 30%
 Chemical Composition:
 C (Carbon) 0.08% max
 Si (Silicon) 1.5%
 P (Phosphorus) 0.040%
 Cr (Chromium) 18.0-21.0%
 Ni (Nickel) 9.0-12.0%
 Mn (Manganese) 1.50%
 S (Sulfur) 0.04%
 Mo (Molybdenum) 2.0-3.0%

Cast Iron – ASTM A-126 Class B

Tensile Strength: 31,000 lb/sq in
 Compressive Strength: 109,000 lbs/sq in
 Tensile Modulus: 15 x 10⁶ lb/sq in
 Chemical Composition:
 C (Carbon) 3.20-3.40 %
 Si (Silicon) 2.10-2.30%
 P (Phosphorus) 0.15-0.30%
 S (Sulfur) 0.08-0.12%
 Mn (Manganese) 0.50-0.80%

Ductile Iron - ASTM A-395 Grade 60 -40 -18

Tensile Strength: 60,000 lb/sq in
 Yield: 40,000 lb/sq in
 Elongation: 18%
 Chemical Composition:
 C (Carbon) 3.20-4.0%
 Si (Silicon) 1.80-2.80%
 P (Phosphorus) 0.08% max.
 S (Sulfur) 0.03% max.
 Mn (Manganese) 0.03% max.

Bronze - ASTM B-62

Tensile Strength: 30,000 lb/sq in
 Yield: 14,000 lbs/sq in
 Elongation: 20%
 Chemical Composition:
 Cu (Copper) 85.0%
 Sn (Tin) 5.0%
 Pb (Lead) 5.0%
 Zn (Zinc) 5.0%
 Ni (Nickel) 1.0% max.
 Fe (Iron) 0.3% max.
 P (Phosphorus) 0.05% max.

Strainer Basket Opening Equivalents

| Mesh | Inches | Millimeters | Microns | Perf | Inches | Millimeters | Microns |
|------|--------|-------------|---------|------|--------|-------------|---------|
| 400 | 0.0015 | 0.0381 | 38 | 1/32 | 0.033 | 0.838 | 838 |
| 300 | 0.0018 | 0.0457 | 45 | 3/64 | 0.045 | 1.143 | 1143 |
| 250 | 0.0024 | 0.0609 | 60 | 1/16 | 0.070 | 1.778 | 1776 |
| 200 | 0.0027 | 0.0686 | 68 | 3/32 | 0.094 | 2.387 | 2387 |
| 150 | 0.0041 | 0.1041 | 104 | 1/8 | 0.125 | 3.175 | 3175 |
| 100 | 0.0065 | 0.1651 | 165 | 5/32 | 0.150 | 3.810 | 3810 |
| 80 | 0.007 | 0.1778 | 177 | 3/16 | 0.1875 | 4.762 | 4762 |
| 60 | 0.009 | 0.2286 | 228 | 1/4 | 0.250 | 6.350 | 6350 |
| 40 | 0.015 | 0.8636 | 380 | 3/8 | 0.375 | 9.525 | 9525 |
| 20 | 0.034 | 0.8636 | 862 | 1/2 | 0.500 | 12.700 | 12700 |

Fabricated and Custom Strainers

Nothing too big, too small or too special

Shown below are four models that can be quickly fabricated upon request. These can be easily modified to your special requirements. Eaton can also create a unique kind strainer

that will fit your needs exactly—with no compromises. Specify the sizes, pressure ratings and materials of construction requirements and Eaton will provide an efficient and cost effective solution.

Models 596 and 2596 Self-Cleaning Strainers



Sizes: From 2" pipe diameter through 60"

Materials of Construction: Fabricated from carbon steel, stainless steel, copper-nickel or Monel for 6" through 60" sizes. Cast iron, cast bronze, carbon steel or stainless steel for 2" through 8" sizes and cast iron ductile in 10 to 16" sizes.

Screen Elements: Stainless steel—openings up to 1/2" offered

Backwashing: Automatic, either through differential pressure sensing or on a timed cycle. Can also be operated manually or in a continuous backwash mode

Construction: In general accordance with ANSI and ASME Sec. VIII, Div. 1, ASME Code construction

Model 90 Simplex Strainer



Sizes: From 1" pipe diameter through 48"

Materials of Construction: Carbon steel, stainless steel or Monel

Flanged Connections: ANSI 150#, 300#, 600#, 900# or 1500#

Cover: Bolted or quick-opening hinged

Basket: Stainless steel—perforated or mesh-lined

Options: Alloy construction for body and baskets, duplex configuration, ASME code construction, other pressure ratings, RTJ-style connections

Model 91 Tee Type Strainer



Sizes: From 2" pipe diameter through 48"

Material of Construction: Carbon steel, stainless steel or Monel

Flanged Connections: ANSI 150#, 300# or 600#

Cover: Bolted or quick-opening hinged

Basket: Stainless steel—perforated or mesh-lined

Installation: Horizontal or vertical

Options: Alloy construction, other pressure ratings

Models 900 and 950 Duplex Strainers



Sizes: From 1" pipe diameter through 48"

Material of Construction: Carbon steel or stainless steel

Flanged Connections: ANSI 150# or 300#

Design: Butterfly or ball valve duplex arrangement

Cover: Bolted or quick-opening hinged

Basket: Perforated or mesh stainless steel

Options: Alloy construction for body or baskets, automated operation, backwash design, ASME Code construction

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