



- BALL VALVES
- AUTOMATION & CONTROLS
- BACKFLOW PREVENTERS
- BUTTERFLY VALVES
- FORGED STEEL VALVES

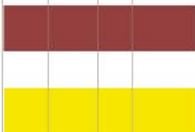
FOR RESIDENTIAL, COMMERCIAL AND INDUSTRIAL APPLICATIONS



**APOLLO<sup>®</sup>**

**pipeline strainers**

- SAFETY RELIEF VALVES
- STRAINERS
- PLUMBING & HEATING PRODUCTS
- IN-LINE CHECK VALVES



## Pipeline Strainers

# Conbraco Industries has the right strainer for your application

If you need pipeline strainers to protect expensive equipment such as valves, meters, solenoids, regulators and pumps in a wide variety of applications, Conbraco Industries should be your source. No other company provides you with more top quality strainer choices.

Conbraco produces a wide variety of strainer models in sizes from 1/8" to 18", suitable for everything from O.E.M. applications to heavy process industry use. They are available in bronze, cast iron, stainless and carbon steels.

Select from threaded or flanged end connections. There are hundreds of screen options, including magnetic screen assemblies for extra protection.

This brochure will help you learn more about all the strainer options available to you from Conbraco. If you need assistance, please feel free to contact your local Conbraco distributor, or call our Customer Service Department at (704) 841-6000. We'll be happy to help you select the right strainer for your specific application.

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## WARRANTY & LIMITATIONS OF LIABILITY

Conbraco Industries, Inc. warrants, to its initial purchaser only, that its products which are delivered to this initial purchaser will be of the kind described in the order or price list and will be free of defects in workmanship or material for a period of two years from the date of delivery to you, our initial purchaser. Should any failure to conform to this warranty appear within two years after the date of the initial delivery to our initial purchaser, Conbraco will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with Conbraco's recommendations and standard industry practice, correct such defects by suitable repair or replacement at Conbraco's own expense.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY WHETHER EXPRESSED OR IMPLIED, EXCEPT THE WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT. Correction of non-conformities, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of Conbraco to our initial purchaser, with respect to the goods, whether based on contract, negligence, strict tort or otherwise. It is the intention of Conbraco Industries, Inc. that no warranty of any kind, whether express or implied, shall pass through our initial purchaser to any other person or corporation.

LIMITATION OF LIABILITY: Conbraco Industries, Inc. SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, DAMAGES OR LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS OR REVENUE, COST OF CAPITAL, COST OF PURCHASED OR REPLACEMENT GOODS, OR CLAIMS OF CUSTOMERS OF OUR INITIAL PURCHASER. THE REMEDIES OF OUR INITIAL PURCHASER, AND ALL OTHERS, SET FORTH HEREIN ARE EXCLUSIVE, AND THE LIABILITY OF CONBRACO WITH RESPECT TO SAME SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, EXCEED THE PRICE OF THE CONBRACO GOODS UPON WHICH SUCH LIABILITY IS BASED.

**RP&G Valve**<sup>®</sup>  
A Division of Conbraco Industries, Inc.

**APOLLO**<sup>®</sup>

## Product Index

| Model                      | Material     | Class   | Connection  | Style | Size Range   | Page  |
|----------------------------|--------------|---------|-------------|-------|--------------|-------|
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| 59-00X-06                  | Bronze       | 400 WOG | Sweat End   | Y     | 1/8" - 2"    | 7     |
| 59-300                     | Bronze       | 400 WOG | Sweat End   | Y     | 1/2" - 2"    | 8     |
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| TCG*                       | Cast Iron    | 250     | NPT         | Y     | 1/4" - 3"    | 10    |
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| C531-S*                    | Carbon Steel | 600     | NPT         | Y     | 1/4" - 3"    | 12    |
| C531-SW*                   | Carbon Steel | 600     | Socket Weld | Y     | 1/4" - 3"    | 12    |
| C533-S                     | 316 SS       | 600     | NPT         | Y     | 1/4" - 2"    | 12    |
| C533-SW                    | 316 SS       | 600     | Socket Weld | Y     | 1/4" - 2"    | 12    |
| FC1*                       | Cast Iron    | 125     | Flanged     | Y     | 1-1/2" - 18" | 13    |
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| C534-S*                    | Ductile Iron | 600     | NPT         | Y     | 1/4" - 3"    | 15    |
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| *Apollo® International     |              |         |             |       |              |       |

## Strainer Comparative Reference

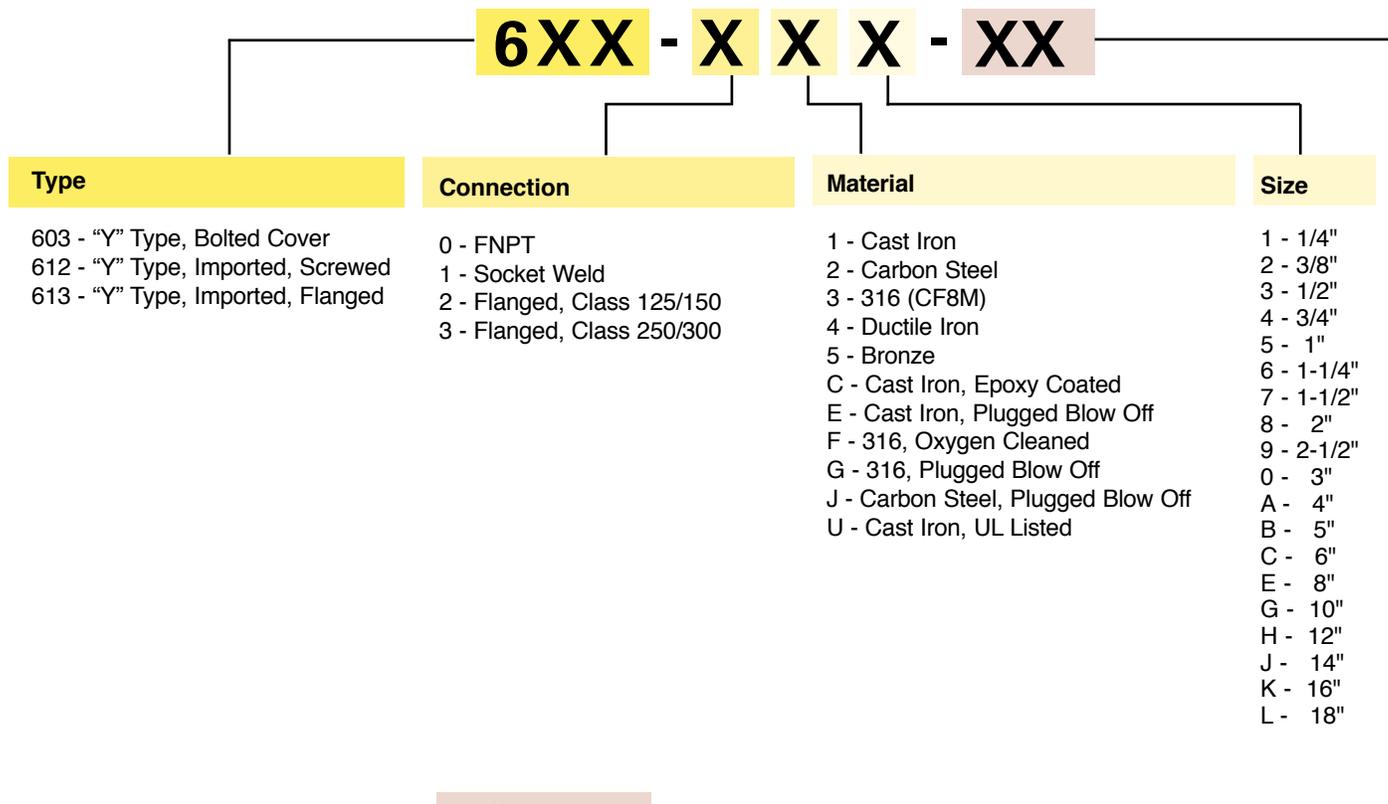
| Product                             | Cii      | Mueller           | Nicholson         | Keckley | Paget | Leslie | Armstrong | Spirax/Sarco | Crane   | Yarway | Watts     |
|-------------------------------------|----------|-------------------|-------------------|---------|-------|--------|-----------|--------------|---------|--------|-----------|
| Bronze Screwed                      | 59       | 352               | 352               | F       | 39-S  | 7100   | F4SC      | BT           |         | 911    | 777MI     |
| Bronze Sweat                        | 59       |                   |                   |         |       |        |           |              |         |        | S777      |
| Cast Iron 250#<br>Screwed           | TCG*     | 11                |                   | B       | B     | 7000   | AISC      | AT           | 990-1/2 | 901    | 77S/77SI  |
| Bronze 150# Flanged                 | 539-15   | 851               | 851               | BA-150  | 39-15 | 7101   | F4FL      | BF-150       |         | 814    |           |
| Bronze 300# Flanged                 | 539-30   | 852               | 852               | BA-300  | 39-30 | 7102   | F4FL      | BF-300       |         | 818    |           |
| Cast Steel 600#<br>Screwed          | C531-S*  | 861-581           | 861-581           | SB      | 31-S  | 7200   | BISC      | CT           | 994-D   | 921    |           |
| Cast Steel 600#<br>Socket Weld      | C531-SW* | 862/582           | 862/582           | SB      | 31-SW | 7209   | BISW      | CT           |         | 921-SW |           |
| Stainless Steel 600#<br>Screwed     | 533-S    | 861-SS/<br>581-SS | 861-SS/<br>581-SS | SSB     | 33-S  | 7500   | E7SC      | 316          |         | 931    |           |
| Stainless Steel 600#<br>Socket Weld | 533-SW   | 862-SS/<br>582-SS | 862-SS/<br>582-SS |         | 33-SW | 7509   | E7SW      | 316-SW       |         | 931-SW | 88S       |
| Cast Iron 125#<br>Flanged           | FC1*     | 751/758           | 751/758           | A-125   | A-125 | 7001   | AIFL      | AF           | 989-1/2 | 804    | 77F-D     |
| Cast Iron 250#<br>Flanged           | FC2*     | 752               | 752               | A-250   | A-250 | 7002   | AIFL      | AF           | 991-1/2 | 806    | 77F-D-250 |
| Ductile Iron Screwed                | C534-S*  | 251-DI            | 251-DI            |         | 34-S  |        |           | DT           |         |        |           |
| Cast Iron 125#<br>FOD Epoxy Coated  | 613C     |                   |                   |         |       |        |           |              |         |        |           |

Note: Not all manufacturers use the same screen as standard

\*Apollo® International

**Pipeline Strainers**

# Part Numbering Matrix



**Screen**

| Screen Type        |               | Screen Material |                     |
|--------------------|---------------|-----------------|---------------------|
| A - 20 MESH        | M - .062 PERF | 1 - 304 SST     | 6 - 304 SST/MAGNETS |
| B - 30 MESH        | N - .125 PERF | 2 - MONEL       | 7 - MONEL/MAGNETS   |
| C - 40 MESH        | O - .187 PERF | 3 - 316 SST     | 8 - 316 SST/MAGNETS |
| D - 60 MESH        | P - .250 PERF | 4 - BRASS       | 9 - BRASS/MAGNETS   |
| E - 80 MESH        | Q - .375 PERF |                 |                     |
| F - 100 MESH       | R - .312 PERF |                 |                     |
| G - 60/80/100 MESH | S - .156 PERF |                 |                     |
| H - 200 MESH       | T - 16 MESH   |                 |                     |
| I - .020 PERF      | U - 12 MESH   |                 |                     |
| J - .027 PERF      | V - .500 PERF |                 |                     |
| K - .033 PERF      | W - 150 MESH  |                 |                     |
| L - .045 PERF      | Y - .093 PERF |                 |                     |

*Note: Does not apply to 59 or 59V Series. See pages 6-9.*

## Strainer Screen Data

Our strainer screens are made in a variety of perforations and mesh openings to best suit the application. Standard material is 304 stainless steel. Other screen materials are available on special request. When screens are constructed of very fine mesh wire cloth, they are reinforced with a rigid outer shell of perforated sheet. Perforated screens are made of sheet stainless steel, the thickness of which is not greater than half the size of the perforations.

### OPENING RATIOS

The following steps should be taken to determine the ratio of openings through strainer screens to the area of inlet pipe size.

1. Determine the size mesh or perforation required to give the desired particle retention.
2. Multiply the total area of the screen by the percent of open area of the perforation or mesh material. The result is the open area of the screen. (Total area of the screen is given in the dimensional charts).
3. The open area of the screen divided by the area of the pipe will give the ratio of open area of the screen to the area of the pipe.
4. To determine the ratio of open area to the pipe on mesh lined reinforced screens, complete step two (2) to find the open area of the mesh. Multiply the open area of the mesh by the percent of open area of the reinforcing material. The result divided by the area of the pipe will be the ratio of open area of the screen to the area of the pipe.

### MAGNETIC INSERTS

Magnetic inserts may be furnished, which when placed inside the strainer screen or basket, will collect very fine ferrous metal particles entrained in the liquid thus protecting equipment against abrasive damage.

### Common Perforations And Mesh Open Areas

| Mesh | Square Opening | % Open Area | Perf  | Actual Opening | % Open Area |
|------|----------------|-------------|-------|----------------|-------------|
| 20   | 0.034          | 46.2        | 0.027 | 0.027          | 23          |
| 40   | 0.015          | 36.0        | 1/32  | 0.033          | 29          |
| 60   | 0.010          | 30.5        | 3/64  | 0.045          | 37          |
| 80   | 0.007          | 31.4        | 1/16  | 0.062          | 30          |
| 100  | 0.006          | 30.3        | 1/8   | 0.125          | 40          |
|      |                |             | 1/4   | 0.250          | 48          |

### Area of Schedule #40 Pipe (IN<sup>2</sup>)

| Pipe Size Inches | Pipe Size Area | Pipe Size Inches | Pipe Size Area | Pipe Size Inches | Pipe Size Area |
|------------------|----------------|------------------|----------------|------------------|----------------|
| 1/2              | 0.304          | 3                | 7.393          | 10               | 78.860         |
| 3/4              | 0.533          | 3-1/2            | 9.886          | 12               | 111.930        |
| 1                | 0.864          | 4                | 12.730         | 14               | 135.280        |
| 1-1/4            | 1.495          | 5                | 20.010         | 16               | 176.720        |
| 1-1/2            | 2.036          | 6                | 28.890         | 18               | 223.680        |
| 2                | 3.355          | 8                | 50.030         |                  |                |
| 2-1/2            | 4.788          |                  |                |                  |                |

## Pressure - Temperature Ratings

For Steel and Alloy Strainers. Pressure temperature ratings shown are for non-shock conditions.

Carbon Steel: ASTM A216 Grade WCB  
Stainless Steel: ASTM A351 Grade CF8M (316)

| Degrees F. | Class 150    |                 | Class 300    |                 | Class 600    |                 |
|------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|
|            | Carbon Steel | Stainless Steel | Carbon Steel | Stainless Steel | Carbon Steel | Stainless Steel |
| -20 to 100 | 285          | 275             | 740          | 720             | 1480         | 1440            |
| 200        | 260          | 235             | 675          | 620             | 1350         | 1240            |
| 300        | 230          | 215             | 655          | 560             | 1315         | 1120            |
| 400        | 200          | 195             | 635          | 515             | 1270         | 1025            |
| 500        | 170          | 170             | 600          | 480             | 1200         | 955             |
| 600        | 140          | 140             | 550          | 450             | 1095         | 900             |
| 650        | 125          | 125             | 535          | 445             | 1075         | 890             |
| 700        | 110          | 110             | 535          | 430             | 1065         | 870             |
| 750        | 95           | 95              | 505          | 425             | 1010         | 855             |
| 800        | 80           | 80              | 410          | 420             | 825          | 845             |
| 850        | 65           | 65              | 270          | 420             | 535          | 835             |
| 900        | 50           | 50              | 170          | 415             | 345          | 830             |
| 950        | 35           | 35              | 105          | 385             | 205          | 775             |
| 1000       | 20           | 20              | 50           | 350             | 105          | 700             |
| 1050       |              |                 |              | 345             |              | 685             |
| 1100       |              |                 |              | 305             |              | 610             |
| 1150       |              |                 |              | 235             |              | 475             |
| 1200       |              |                 |              | 185             |              | 370             |
| 1250       |              |                 |              | 145             |              | 295             |
| 1300       |              |                 |              | 115             |              | 235             |
| 1350       |              |                 |              | 95              |              | 190             |
| 1400       |              |                 |              | 75              |              | 150             |
| 1450       |              |                 |              | 60              |              | 115             |
| 1500       |              |                 |              | 40              |              | 85              |

Skilled specialists in our engineering department are available to provide customer assistance on special straining applications.

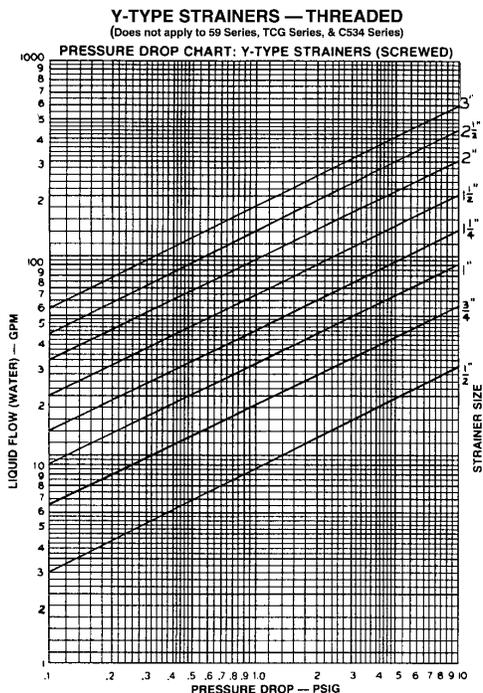
## Pipeline Strainers

# Strainer Pressure Drop Data

Pressure drop tests for data contained on charts are based on standard screens used for liquid service. Tests conducted at Conbraco Industries, Inc.'s laboratory indicate a 25% increase in pressure drop with screens 50% clogged. These figures are based on non-reinforced screens.

**Flow Coefficient:** The flow coefficient (Cv) is the number of gallons per minute of water flowing through a given size restriction at a pressure drop of one (1) psig.

To obtain the Cv factor for a given size strainer, read the capacity at the intersection with one (1) psig pressure drop. Example: Cv for a 5" flanged "Y" type strainer is 470. To determine the pressure drop for liquids other than water, please refer to the multiplying factor data.



### MULTIPLYING FACTORS

#### Screens Other Than Standard:

| Stainer Size | % Open Area |         |         |       |
|--------------|-------------|---------|---------|-------|
|              | 35 or Over  | 25 - 35 | 20 - 25 | Lined |
| 1/4 thru 1   | 1.0         | 1.0     | 1.15    | 1.25  |
| 1-1/4 thru 2 | 1.0         | 1.0     | 1.4     | 1.8   |
| 2-1/2 thru 6 | 1.0         | 1.2     | 1.6     | 2.0   |
| 8 thru 18    | 1.0         | 1.3     | 1.8     | 2.2   |

Multiply the pressure drop as determined from appropriate chart by the factor in the table above to obtain the correct pressure drop.

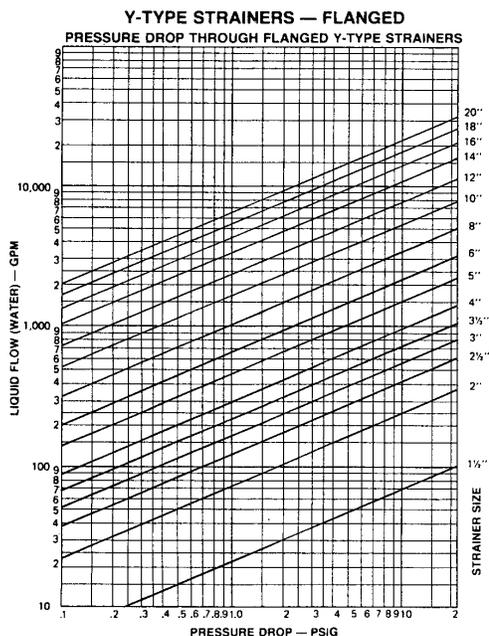
#### When specific gravity is other than 1:

Multiply the pressure drop from the appropriate chart by the specific gravity of the liquid. (Note: When the specific gravity is less than 1, use 1 as the factor).

#### Viscosity other than 34 SSU:

| SSU | Factor | SSU | Factor | SSU  | Factor | SSU   | Factor |
|-----|--------|-----|--------|------|--------|-------|--------|
| 40  | .96    | 100 | .70    | 700  | .43    | 4000  | .31    |
| 50  | .85    | 150 | .62    | 800  | .42    | 5000  | .29    |
| 60  | .82    | 200 | .57    | 900  | .41    | 6000  | .285   |
| 70  | .77    | 300 | .52    | 1000 | .39    | 7000  | .28    |
| 80  | .79    | 400 | .48    | 2000 | .35    | 8000  | .275   |
| 90  | .72    | 500 | .46    | 3000 | .33    | 9000  | .27    |
|     |        |     |        |      |        | 10000 | .26    |

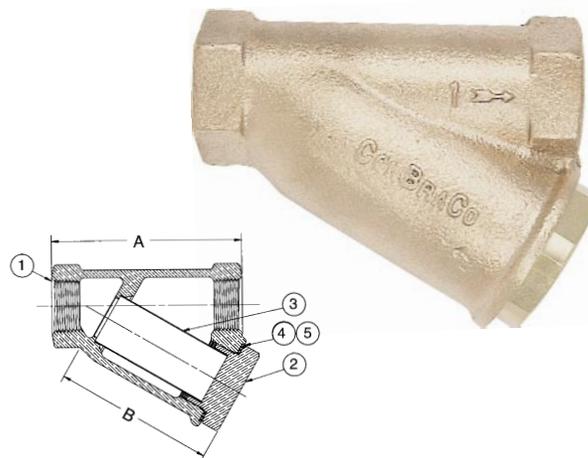
Divide the pressure as determined from the appropriate chart by the factor in the above table to obtain the corrected pressure drop.



# Bronze NPT "Y" Strainers

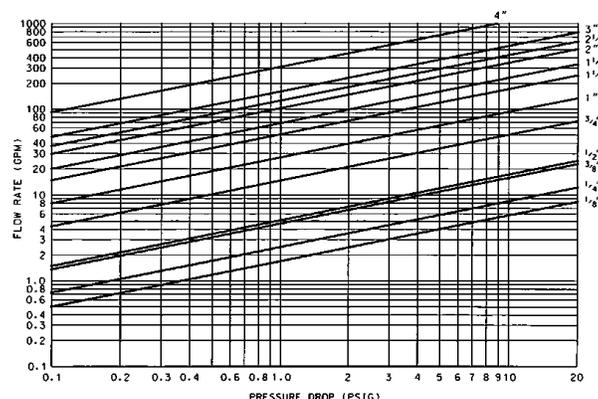
## 59 Series

Conbraco's 59 Series "Y" strainers are lightweight and compact. All sizes offer maximum protection against foreign particles in piping systems and process equipment. Cast bronze body and stainless steel screens are completely corrosion resistant. Self-aligning screen is easily accessed for cleaning or service. Operating pressures up to 400 psig make the 59 Series an excellent choice as a versatile, multi-purpose strainer. Sizes 1/8" to 1/2" are perfect for OEM applications and are available as UL recognized components for use as a secondary strainer on oil burning equipment. Optional tapped caps are also available for convenient cleaning of the screen and are not plugged (suffix-02). For tapped cap with plug installed use suffix -P2.



- **WORKING PRESSURE (non-shock):**  
300 psig @ 350°F Steam  
400 psig @ 150°F Water, Oil, Gas
- **SELF ALIGNING SCREENS**  
304 SS (Standard) available in a large variety of meshes (thru 100). Contact factory for optional meshes.

59 SERIES FLOW DATA



| Materials of Construction |                |   |             |          |
|---------------------------|----------------|---|-------------|----------|
| No.                       | Part           | Material                                      | ASTM Spec   | Remarks  |
| 1                         | Body           | Bronze  | B584        |          |
| 2                         | Cap            | Rod Brass (1/8" - 1")<br>Bronze (1-1/4" - 4") | B16<br>B584 |          |
| 3                         | *Screen        | Stainless Steel                               |             | Type 304 |
| 4                         | *O-Ring Teflon | (1/8" thru 1/2")                              |             |          |
| 5                         | *Gasket        | PTFE (3/4" thru 4")                           |             |          |

\* Recommended spare parts

**Standard Screens:**

| Size           | Screen Opening |
|----------------|----------------|
| 1/8" thru 1/2" | 50 Mesh        |
| 3/4" thru 3"   | 20 Mesh        |
| 4"             | .125 Perf.     |

| Suffix Key |   |
|------------|---|
| -02        | Tapped Cap                                |
| -P2        | Tapped Cap with Plug                      |
| -07        | Tapped Cap with Plug and Alternate Screen |
| -06        | Strainer/Ball Valve Combination           |
| -03        | Monel Screen                              |

| Suffix Key |          |
|------------|----------|
| -E1        | 20 MESH  |
| -A1        | 40 MESH  |
| -B1        | 60 MESH  |
| -C1        | 80 MESH  |
| -H1        | 100 MESH |

**Dimensional Specifications**

| Model     | Size   | A        | B      | C | (Suffix-02) | Wt./100 | Screen Area (IN <sup>2</sup> ) |
|-----------|--------|----------|--------|---|-------------|---------|--------------------------------|
| 59-000-01 | 1/8"   | 2        | 1-1/4  | — | 1/8 NPT     | 44.5    | 1.38                           |
| 59-001-01 | 1/4"   | 2        | 1-1/4  | — | 1/8 NPT     | 42.5    | 1.38                           |
| 59-002-01 | 3/8"   | 2-11/16  | 2      | — | 1/4 NPT     | 78.6    | 3.19                           |
| 59-003-01 | 1/2"   | 2-11/16  | 2      | — | 1/4 NPT     | 75.1    | 3.19                           |
| 59-004-01 | 3/4"   | 3-7/8    | 3-1/4  | — | 1/2 NPT     | 174     | 8.18                           |
| 59-005-01 | 1"     | 4-3/4    | 4      | — | 3/4 NPT     | 276     | 12.9                           |
| 59-006-01 | 1-1/4" | 5-1/8    | 4-1/4  | — | 3/4 NPT     | 358     | 16.2                           |
| 59-007-01 | 1-1/2" | 5-3/4    | 5      | — | 1 NPT       | 541     | 22.8                           |
| 59-008-01 | 2"     | 6-3/4    | 6      | — | 1-1/4 NPT   | 747     | 32.7                           |
| 59-009-01 | 2-1/2" | 7-15/16  | 5-7/8  | — | 1-1/4 NPT   | 1130    | 47.3                           |
| 59-010-01 | 3"     | 9-1/8    | 6-7/8  | — | 1-1/2 NPT   | 1580    | 64.8                           |
| 59-011-01 | 4"     | 11-15/16 | 10-1/8 | — | 1-1/2 NPT   | 3070    | 115                            |
| 59-UL0-01 | 1/8"   | 2        | 1-1/4  | — | 1/8 NPT     | 44.5    | 1.38                           |
| 59-UL1-01 | 1/4"   | 2        | 1-3/4  | — | 1/8 NPT     | 42.5    | 1.38                           |
| 59-UL2-01 | 3/8"   | 2-11/16  | 2      | — | 1/4 NPT     | 78.6    | 3.19                           |
| 59-UL3-01 | 1/2"   | 2-11/16  | 2      | — | 1/4 NPT     | 75.1    | 3.19                           |



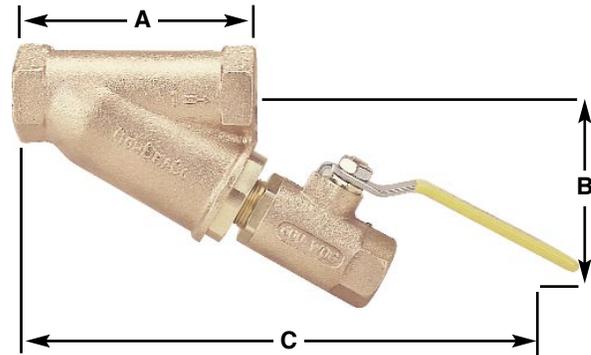
## ● Pipeline Strainers

# Bronze NPT "Y" Strainer & Ball Valve Combination

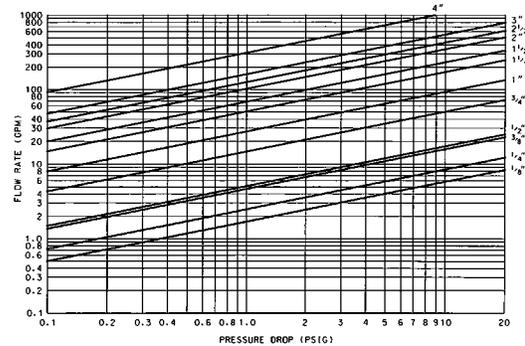
### 59-00X-06 Series

Conbraco's 59-00X-06 Series, with operating pressures up to 400 psig, makes an outstanding choice as a versatile multi-purpose OEM strainer. With the addition of the Apollo® Ball Valve, you receive a high quality product, engineered and designed for safety and outstanding performance. All sizes offer maximum protection against foreign particles in piping systems and process equipment. Both the strainer and the ball valve are completely corrosion resistant. The ball valve, which offers a blow-out-proof stem design, allows for excellent debris removal during cleaning or blow-off of the screen. Even with the ball valve addition, the self-aligning screen remains easily accessible for routine servicing.

- **WORKING PRESSURE (non-shock):**  
300 psig @ 350°F Steam  
400 psig @ 150°F Water, Oil, Gas
- **SELF ALIGNING SCREENS**  
304 SS (Standard) available in a large variety of meshes (thru 100).  
Contact factory for optional meshes.



59 SERIES FLOW DATA



#### Materials of Construction

| No. | Part       | Material                                      | ASTM Spec   | Remarks       |
|-----|------------|---|-------------|---------------|
| 1   | Body       | Bronze  | B584        |               |
| 2   | Cap        | Rod Brass (1/2" – 1")<br>Bronze (1-1/4" – 2") | B16<br>B584 |               |
| 3   | Ball Valve | Bronze  | B584        | 70-800 Series |
| 4   | *Screen    | Stainless Steel                               |             | Type 304      |
| 5   | *O-Ring    | Silicone (1/8" thru 1/2")                     |             |               |
| 6   | *Gasket    | PTFE (3/4" thru 2")                           |             |               |

\* Recommended spare parts

#### STANDARD SCREENS:

| Size           | Screen Opening |
|----------------|----------------|
| 1/8" thru 1/2" | 50 Mesh        |
| 3/4" thru 2"   | 20 Mesh        |

#### Dimensional Specifications

| Model     | Size   | A       | B       | C        | Tapped Cap (Suffix-02) | Wt./100 | Screen Area (IN <sup>2</sup> ) |
|-----------|--------|---------|---------|----------|------------------------|---------|--------------------------------|
| 59-003-06 | 1/2"   | 2-11/16 | 3-3/4   | 6-61/64  | —                      | 138     | 3.19                           |
| 59-004-06 | 3/4"   | 3-13/16 | 2-15/16 | 8-31/32  | —                      | 246     | 8.18                           |
| 59-005-06 | 1"     | 4-3/4   | 3-5/8   | 11       | —                      | 417     | 12.9                           |
| 59-006-06 | 1-1/4" | 5-1/8   | 3-15/16 | 11-1/2   | —                      | 499     | 16.2                           |
| 59-007-06 | 1-1/2" | 5-3/4   | 4-13/32 | 12-27/64 | —                      | 720     | 22.8                           |
| 59-008-06 | 2"     | 6-25/32 | 4-21/32 | 13-25/32 | —                      | 1091    | 32.7                           |

Note: Dimensions shown are subject to change. Contact factory for exact dimensions when required.

Note: Dimensions shown are subject to change.

## Bronze Sweat End "Y" Strainers

### 59-300 Series

Conbraco's 59 Series Sweat End Y-Strainers provide excellent protection against particle contamination in piping systems and process equipment. This lightweight and compact series is designed with minimal wall thickness at the solder ends to allow for high strength solder joints. These Y-Strainers consist of bronze bodies and stainless steel screens, and are corrosion resistant. The 59 Series Sweat End Strainers are designed for operating pressures up to 400 psig and are available in sizes 1/2" through 2". Optional tapped caps are also available for convenient cleaning of the screen and are not plugged (suffix-02). For tapped cap with plug installed use suffix-P2.

- **WORKING PRESSURE (non-shock):**  
300 psig @ 350°F Steam  
400 psig @ 150°F Water, Oil, Gas
- **SELF ALIGNING SCREENS**  
304 SS (Standard) and is available in a variety of meshes (thru 100). Contact factory for optional meshes.
- **PRESSURE DROP**  
Not available at the time of printing. Please contact Customer Service for proper data.



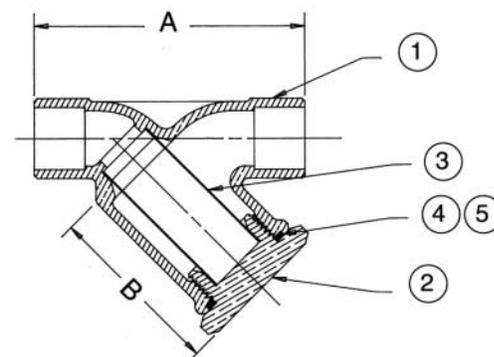
#### Materials of Construction

| No. | Part    | Material        | ASTM Spec | Remarks          |
|-----|---------|-----------------|-----------|------------------|
| 1   | Body    | Bronze          | B584      |                  |
| 2   | Cap     | Bronze          | B584      | (1-1/4" - 2")    |
|     |         | Rod Brass       | B16       | (1/2" - 1")      |
| 3   | *Screen | Stainless Steel |           | Type 304         |
| 4   | *Gasket | PTFE            |           | (3/4" - 2" only) |
| 5   | *O-Ring | PTFE            |           | (1/2" only)      |

\* Recommended spare parts

#### \* STANDARD SCREENS:

| Size         | Screen Opening | Suffix Key                                    | Suffix Key   |
|--------------|----------------|---|--------------|
| 1/2"         | 50 Mesh        | -02 Tapped Cap                                | -E1 20 MESH  |
| 3/4" thru 2" | 20 Mesh        | -P2 Tapped Cap with Plug                      | -A1 40 MESH  |
|              |                | -03 Monel Screen                              | -B1 60 MESH  |
|              |                | -07 Tapped Cap with Plug and Alternate Screen | -C1 80 MESH  |
|              |                |   | -H1 100 MESH |



#### Dimensional Specifications

| Model     | Size   | A     | B       | Tapped Cap (Suffix-02) | Wt./100 | Screen Area (IN <sup>2</sup> ) |
|-----------|--------|-------|---------|------------------------|---------|--------------------------------|
| 59-303-01 | 1/2"   | 2-3/4 | 1-13/16 | 1/4 NPT                | 50      | 3.19                           |
| 59-303-P2 | 1/2"   |       |         | 1/4 NPT                | 50      |                                |
| 59-304-01 | 3/4"   | 4     | 2-7/8   | 1/2 NPT                | 121     | 8.18                           |
| 59-304-P2 | 3/4"   |       |         | 1/2 NPT                | 121     |                                |
| 59-305-01 | 1"     | 4-3/4 | 3-9/16  | 3/4 NPT                | 189     | 12.9                           |
| 59-305-P2 | 1"     |       |         | 3/4 NPT                | 189     |                                |
| 59-306-01 | 1-1/4" | 5-1/4 | 3-15/16 | 3/4 NPT                | 280     | 16.2                           |
| 59-306-P2 | 1-1/4" |       |         | 3/4 NPT                | 280     |                                |
| 59-307-01 | 1-1/2" | 6     | 4-5/8   | 1 NPT                  | 426     | 22.8                           |
| 59-307-P2 | 1-1/2" |       |         | 1 NPT                  | 426     |                                |
| 59-308-01 | 2"     | 7-1/4 | 5       | 1-1/4 NPT              | 627     | 32.7                           |
| 59-308-P2 | 2"     |       |         | 1-1/4 NPT              | 627     |                                |

Note: Dimensions shown are subject to change.

## Pipeline Strainers

# Bronze "Mini" Strainers

### 59V Series "Mini" Strainer, sizes 1/8" and 1/4"

The body of the 59-V is corrosion-resistant solid cast bronze, ASTM B-584. The removable clean-out cap is solid brass bar stock, ASTM B-16. Standard screens are made of 304 stainless steel, and are 50 mesh.

| Materials of Construction |        |                 |           |                     |
|---------------------------|--------|-----------------|-----------|---------------------|
| No.                       | Part   | Material        | ASTM Spec | Remarks             |
| 1.                        | Body   | Cast Bronze     | B-584     |                     |
| 2.                        | Screen | Stainless Steel |           | Type 304<br>50 Mesh |
| 3.                        | O-Ring | EPDM            |           |                     |
| 4.                        | Cap    | Rod Brass       | B-16      |                     |

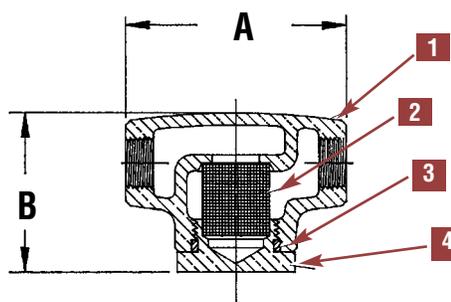
Note: Specify suffix -H1 for optional 100 Mesh.  
 -C1 for optional 80 Mesh.  
 -D1 for optional 30 Mesh.

• **WORKING PRESSURE (non-shock):**

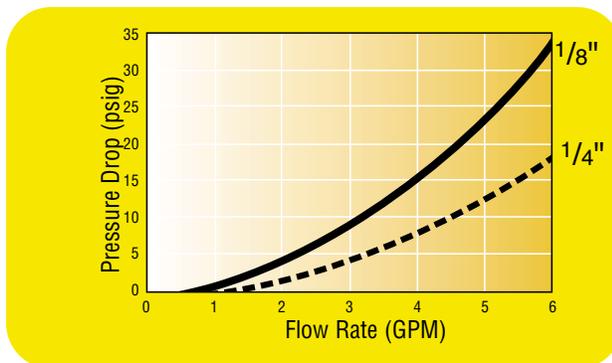
400 psig @ 210°F WOG  
 125 psig @ 400°F WSP

• **CV FACTORS**

1/8" 1.03 GPM  
 1/4" 1.42 GPM



| Dimensional Specifications |         |       |        |         |
|----------------------------|---------|-------|--------|---------|
| Model                      | Size    | A     | B      | Wt./100 |
| 59V-000-01                 | 1/8 NPT | 1-3/4 | 1-1/4  | 25      |
| 59V-001-01                 | 1/4 NPT | 2     | 1-5/16 | 29.7    |



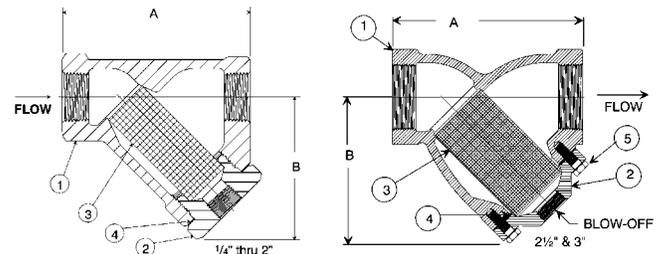
# Cast Iron "Y" Strainers

## TCG Series Sizes 1/3" Thru 3" (Apollo® International)

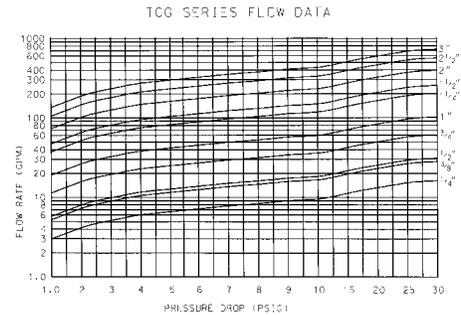
Install these hardworking strainers upstream in almost any application to protect valves, regulators, solenoids and meters from rust, dirt and pipe scale. The "TCG" Series is a rugged 250 lb. WSP-rated strainer constructed from high-tensile ASTM A-126 Class B cast iron with blow-off connections and easily removable cylindrical screens.

A tapered seat allows screens to be self-aligning and assures a perfect fit. Self-cleaning is easily accomplished by opening the valve or plug connected to the blow-off outlet. (Not normally furnished plugged.) Blow-off connection is flanged on 2-1/2" and 3" sizes. Corrosion resistant stainless steel screens are standard.

- **NPT THREADED ENDS**
- **WORKING PRESSURE (Non-Shock)**  
250 psig @ 406°F. Steam  
400 psig @ 150°F. Water, Oil, Gas
- **SELF CLEANING**  
Accomplished by opening the blow-off connection.
- **SELF ALIGNING SCREENS\*\***  
Available in 304 SS (Standard), 316 SS, Monel and Brass. All materials are available in a large variety of perforations and meshes.
- **PRESSURE DROP**  
See applicable chart on page 5.
- **NPT TAPPED BLOW-OFF CONNECTION**



### TCG Strainer Flow Data



\*\*Standard Screens:

| Size           | Screen Opening | Suffix |
|----------------|----------------|--------|
| 1/4" thru 2"   | 20 Mesh        | A1     |
| 2 1/2" thru 3" | .045 Perf.     | L1     |

### Materials of Construction

| No. | Part       | Material        | ASTM Spec | Remarks  |
|-----|------------|-----------------|-----------|----------|
| 1   | Body       | Cast Iron       | A126      | Cl. B    |
| 2   | Plug/Cover | Cast Iron       | A126      | Cl. B    |
| 3   | *Screen    | Stainless Steel |           | Type 304 |
| 4   | *Gasket    | Graphite        |           |          |
| 5   | ***Bolts   | Carbon Steel    |           | Grade 2  |

\* Recommended Spare Parts

\*\* Screen shown is standard screen material. Contact customer service for optional materials and perforations/mesh.

\*\*\* 2-1/2" & 3" only

### Dimensional Specifications

|          | Size   | A      | B       | Blow-Off NPT | Weight/Lbs. | Screen Area In2 |
|----------|--------|--------|---------|--------------|-------------|-----------------|
| 612011A1 | 1/4"   | 3-3/16 | 2-3/8   | 1/4          | 1-1/4       | 2.6             |
| 612012A1 | 3/8"   | 3-3/16 | 2-3/8   | 1/4          | 1-1/4       | 2.6             |
| 612013A1 | 1/2"   | 3-3/16 | 2-3/8   | 1/4          | 1-1/2       | 2.6             |
| 612014A1 | 3/4"   | 3-3/4  | 2-3/8   | 3/8          | 2-1/4       | 4.9             |
| 612015A1 | 1"     | 4      | 3-1/2   | 3/8          | 3           | 6.7             |
| 612016A1 | 1-1/4" | 5      | 4-1/8   | 3/4          | 5-1/4       | 11.6            |
| 612017A1 | 1-1/2" | 5-3/4  | 4-11/16 | 3/4          | 6-1/2       | 15.6            |
| 612018A1 | 2"     | 7      | 5-7/16  | 1            | 11-1/8      | 23.1            |
| 612019L1 | 2-1/2" | 9-1/4  | 5-11/16 | 1            | 23-1/2      | 55.6            |
| 612010L1 | 3"     | 10     | 7       | 1            | 33          | 78.4            |

Note: Dimensions shown are subject to change.

## Pipeline Strainers

# Flanged Cast Bronze "Y" Strainers

### 539 Series Class 150 & 300

Ideal for most standard industrial applications. Use to protect meters, nozzels, heat exchangers, condensers or other process equipment against debris.

- WORKING PRESSURE (non-shock)**

- 539-15 - Class 150**

- 150 psig @ 406°F. Steam

- 225 psig @ 150°F. Water, Oil, Gas

- 539-30 - Class 300**

- 300 psig @ 422° F. Steam

- 500 psig @ 150° F. Water, Oil, Gas

- SELF CLEANING**

- Accomplished by opening the blow-off connection.

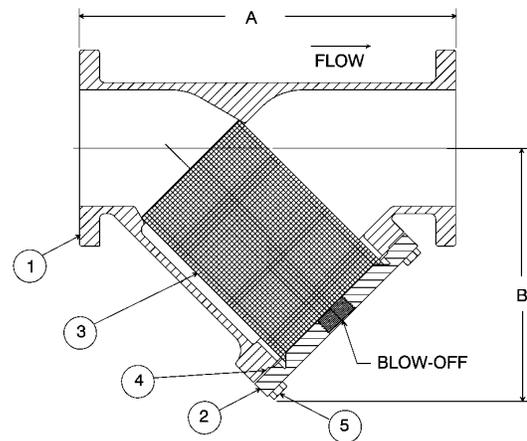
- SELF ALIGNING SCREENS**

- Available in 304 SS (Standard), 316 SS, Monel and Brass. All materials are available in a large variety of perforations and meshes. Contact factory for optional materials and perforations/mesh.

- PRESSURE DROP**

- See applicable chart on page 5.

- NPT TAPPED BLOW-OFF CONNECTION.**



#### Materials of Construction

| No. | Part       | Material        | ASTM Spec | Remarks  |
|-----|------------|-----------------|-----------|----------|
| 1   | Body       | Bronze          | B584      |          |
| 2   | Cover/Plug | Bronze          | B584      |          |
| 3   | *Screen    | Stainless Steel |           | Type 304 |
| 4   | *Gasket    | Blue Guard 3000 |           |          |
| 5   | Bolting    | Carbon Steel    |           | Grade 2  |

\*Recommended Spare Parts

#### Model Numbers/Selection Information

|                |         |                  |
|----------------|---------|------------------|
| Model "539-15" | 150 FLG | Sizes 2" Thru 8" |
| Model "539-30" | 300 FLG | Sizes 2" Thru 8" |

#### Standard Screens:

| Service | Size       | Screen Openings | Screen Suffix | Material            |
|---------|------------|-----------------|---------------|---------------------|
| Liquid  | 2" Thru 3" | .045 Perf.      | L1            | 304 Stainless Steel |
|         | 4" Thru 8" | .125 Perf.      | N1            |                     |
| Steam   | 2" Thru 3" | .045 Perf.      | L1            | 304 Stainless Steel |
|         | 4" Thru 8" | .062 Perf.      | M1            |                     |

#### Part Numbers

| CL150 (Liquid)  |             | CL300 (Liquid)  |             |
|-----------------|-------------|-----------------|-------------|
| 2" 603258LI     | 5" 60325BNI | 2" 603358LI     | 5" 60335BNI |
| 2-1/2" 603259LI | 6" 60325CNI | 2-1/2" 603359LI | 6" 60335CNI |
| 3" 603250LI     | 8" 60325ENI | 3" 603350LI     | 8" 60335ENI |
| 4" 60325ANI     |             | 4" 60335ANI     |             |

#### Dimensional Specifications

| Size   | A         |           | B      | Blow-Off<br>NPT | Screen<br>Area In <sup>2</sup> | Weight/Lbs. |           |
|--------|-----------|-----------|--------|-----------------|--------------------------------|-------------|-----------|
|        | Class 150 | Class 300 |        |                 |                                | Class 150   | Class 300 |
| 2"     | 9-1/2     | 10-1/8    | 6-1/4  | 1               | 46.0                           | 30          | 33        |
| 2-1/2" | 11-1/4    | 11-3/4    | 7-1/8  | 1-1/4           | 58.3                           | 50          | 55        |
| 3"     | 12-3/8    | 13        | 8-3/8  | 1-1/2           | 74.5                           | 61          | 71        |
| 4"     | 14-1/2    | 15-1/2    | 10     | 1-1/2           | 118.7                          | 91          | 113       |
| 5"     | 16-7/8    | 17-1/2    | 12-1/4 | 2               | 189.0                          | 146         | 178       |
| 6"     | 19-1/8    | 19-7/8    | 14     | 2               | 270.0                          | 180         | 212       |
| 8"     | 24-1/4    | 25-1/8    | 17     | 2               | 425.0                          | 370         | 410       |

Note: Dimensions shown are subject to change.

# Cast Carbon Steel & 316 Stainless "Y" Strainers

## Threaded & Socket Weld C531-S & SW Series C533-S & SW Series

(Apollo® International)

Durable carbon or stainless steel, threaded or socket, in sizes 1/4" through 3".

### • WORKING PRESSURE (Non-Shock)

#### Carbon Steel

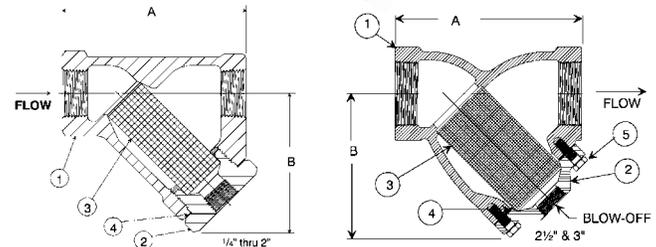
600 psig @ 839°F. Steam

1480 psig @ 100°F. Water, Oil & Gas

#### Stainless Steel

600 psig @ 1124°F. Steam

1440 psig @ 100°F. Water, Oil & Gas



### Materials of Construction

#### Carbon Steel

| No. | Part                    | Material               | ASTM Spec | Remarks      |
|-----|-------------------------|------------------------|-----------|--------------|
| 1   | Body                    | Carbon Steel           | A216      | Grade WCB    |
| 2   | Plug (1/4" - 2")        | Carbon Steel           | A216      | Grade WCB    |
| 2   | Cover (2-1/2" - 3")     | Carbon Steel           | A515      | Grade 60     |
| 3   | *Screen                 | Stainless Steel        |           | Type 304     |
| 4   | *Gasket (1/4" - 1-1/2") | Copper                 |           |              |
| 4   | *Gasket (2")            | 304 SS/Carbon Graphite |           | Spiral Wound |
| 4   | *Gasket (2-1/2" - 3")   | Carbon Graphite        |           |              |
| 5   | Bolting                 | Carbon Steel           |           | Grade 5      |

#### Stainless Steel

| No. | Part                 | Material               | ASTM Spec | Remarks          |
|-----|----------------------|------------------------|-----------|------------------|
| 1   | Body                 | Stainless Steel        | A351      | Grade CF8M (316) |
| 2   | Plug (1/4" - 1-1/4") | Stainless Steel        | A276      | Grade 316        |
| 2   | Cover (1-1/2" - 2")  | Stainless Steel        | A351      | Grade CF8M (316) |
| 3   | *Screen              | Stainless Steel        |           | Type 304         |
| 4   | *Gasket (1/4" - 2")  | 304 SS/Carbon Graphite |           | Spiral Wound     |

\* Recommended Spare Parts

### • STANDARD SCREENS:

1/4" Thru 2" - 20 Mesh/304 Stainless Steel

2-1/2" & 3" - .045 Perf./304 Stainless Steel

Contact Factory for Optional Materials and Perforations/Mesh.

### • PRESSURE DROP:

See applicable chart on page 5.

### • NPT TAPPED BLOW-OFF CONNECTION

### Model Numbers/Selection Information

#### Carbon Steel Sizes 1/4" Thru 3"

|                 |                       |
|-----------------|-----------------------|
| Model "C531-S"  | NPT                   |
| Model "C531-SW" | Socket Weld (1/2"-2") |

#### Stainless Steel Sizes 1/4" Thru 2"

|                |                       |
|----------------|-----------------------|
| Model "533-S"  | NPT                   |
| Model "533-SW" | Socket Weld (1/2"-2") |

### Part Numbers

| Carbon Steel    |                 | Stainless Steel |                 |
|-----------------|-----------------|-----------------|-----------------|
| CS-NPT C531-S   | C531-SW         | C533-S          | C533-SW         |
| 1/4" 612021A1   | 1/2" 612123A1   | 1/4" 612031A1   | 1/2" 612133A1   |
| 3/8" 612022A1   | 3/4" 612124A1   | 3/8" 612032A1   | 3/4" 612134A1   |
| 1/2" 612023A1   | 1" 612125A1     | 1/2" 612033A1   | 1" 612135A1     |
| 3/4" 612024A1   | 1-1/4" 612126A1 | 3/4" 612034A1   | 1-1/4" 612136A1 |
| 1" 612025A1     | 1-1/2" 612127A1 | 1" 612035A1     | 1-1/2" 612137A1 |
| 1-1/4" 612026A1 | 2" 612128A1     | 1-1/4" 612036A1 | 2" 612138A1     |
| 1-1/2" 612027A1 |                 | 1-1/2" 612037A1 |                 |
| 2" 612028A1     |                 | 2" 612038A1     |                 |
| 2-1/2" 612029A1 |                 |                 |                 |
| 3" 612020A1     |                 |                 |                 |

### Dimensional Specifications

| Size    | A        | B      | Blow-Off NPT | Weight/Lbs. | Screen Area In <sup>2</sup> |
|---------|----------|--------|--------------|-------------|-----------------------------|
| 1/4"    | 2-11/16  | 2-1/16 | 1/4          | 1           | 2.5                         |
| 3/8"    | 2-11/16  | 2-1/16 | 1/4          | 1           | 2.5                         |
| 1/2"    | 3-3/8    | 2-3/4  | 3/8          | 2           | 5.4                         |
| 3/4"    | 4-7/16   | 3-5/8  | 3/8          | 3-3/4       | 8.7                         |
| 1"      | 4-7/8    | 3-3/4  | 1/2          | 4           | 12.7                        |
| 1-1/4"  | 5-3/8    | 4-3/8  | 3/4          | 7           | 18.1                        |
| 1-1/2"  | 6-3/8    | 5-1/8  | 3/4          | 8-3/4       | 25.3                        |
| 2"      | 7-1/2    | 6      | 1            | 12          | 39.2                        |
| 2-1/2"* | 10-9/16  | 7      | 1-1/4        | 37          | 58.3                        |
| 3"*     | 10-15/16 | 8-1/8  | 1-1/4        | 48          | 76.7                        |

\* Note: Available in carbon steel only. Dimensions shown are subject to change.

## Pipeline Strainers

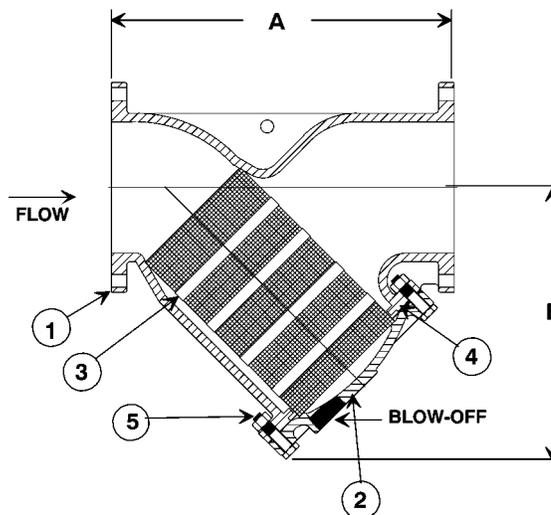
# Flanged Cast Iron "Y" Strainers

## Class 125 & 250 "FC1" & "FC2" Series

(Apollo® International)



(Also available with FDA approved epoxy coating, see page 24. 2-1/2" - 6" available as UL listed – see page 14)



Same great features as "TCG" Series but with flanged connections for applications from 1-1/2" through 18". Protects process equipment against harmful debris.

• **WORKING PRESSURE (Non-Shock)**

**Model FC1 - Class 125**

Sizes 1-1/2" Thru 12"  
125 psig @ 450°F. Steam • 200 psig @ 150°F. Water, Oil, Gas  
Sizes 14" Thru 18"  
125 psig @ 250°F. Steam • 150 psig @ 150°F. Water, Oil, Gas

**Model FC2 - Class 250**

Sizes 1-1/2" Thru 12"  
250 psig @ 450°F. Steam • 500 psig @ 150°F. Water, Oil, Gas  
Sizes 14" Thru 18"  
250 psig @ 275°F. Steam • 300 psig @ 150°F. Water, Oil, Gas

• **SELF CLEANING**

Accomplished by opening the blow-off connection.

• **SELF ALIGNING SCREENS**

Available in 304SS (Standard), 316 SS, Monel and Brass. All materials are available in large variety of perforations and meshes. Contact factory for optional materials and perforations/mesh.

• **PRESSURE DROP**

See applicable chart on page 5.

• **NPT TAPPED BLOW-OFF CONNECTION**

### Materials of Construction

| No. | Part    | Material        | ASTM Spec | Remarks  |
|-----|---------|-----------------|-----------|----------|
| 1   | Body    | Cast Iron       | A126      | CI.B     |
| 2   | Cover   | Cast Iron       | A126      | CI.B     |
| 3   | *Screen | Stainless Steel |           | Type 304 |
| 4   | *Gasket | Blue Guard 3000 |           |          |
| 5   | Bolting | Carbon Steel    |           | Grade 2  |

\* Recommended Spare Parts

**Standard Screens:**

| Service | Size           | Screen Openings | Screen Suffix | Material            |
|---------|----------------|-----------------|---------------|---------------------|
| Liquid  | 1-1/2" Thru 3" | .045 Perf.      | L1            | 304 Stainless Steel |
|         | 4" Thru 16"    | .125 Perf.      | N1            |                     |
|         | 18"            | .250 Perf.      | P1            |                     |
| Steam   | 1-1/2" Thru 6" | .045 Perf.      | L1            | 304 Stainless Steel |
|         | 8" Thru 16"    | .062 Perf.      | M1            |                     |
|         | 18"            | .125 Perf.      | N1            |                     |

### Part Numbers

| FC1-125 (Liquid) |          |     |          | FC2-250 (Liquid) |          |     |          |
|------------------|----------|-----|----------|------------------|----------|-----|----------|
| 1-1/2"           | 613217L1 | 8"  | 613218L1 | 1-1/2"           | 613317L1 | 2"  | 613318L1 |
| 2-1/2"           | 613219L  | 10" | 613210L1 | 2-1/2"           | 613319L1 | 3"  | 613310L1 |
| 4"               | 61321ANI | 12" | 61321BNI | 4"               | 61331ANI | 5"  | 61331BNI |
| 6"               | 61321CNI | 14" | 61321ENI | 6"               | 61331CNI | 8"  | 61331ENI |
| 10"              | 61321GNI | 16" | 61321HNI | 10"              | 61331GNI | 12" | 61331HNI |
| 14"              | 61321JNI | 18" | 61321KNI | 14"              | 61331JNI | 16" | 61331KNI |
| 18"              | 61321LPI |     |          | 18"              | 61331LPI |     |          |

### Dimensional Specifications

| Size   | A                 |                   | B                 |                   | Size Blow-Off Plug | Weight Lbs.       |                   | Screen Area In <sup>2</sup> |
|--------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|-----------------------------|
|        | Class 125 Flanged | Class 250 Flanged | Class 125 Flanged | Class 250 Flanged |                    | Class 125 Flanged | Class 250 Flanged |                             |
| 1-1/2" | 9-1/2             | 9-1/2             | 5-7/16            | 5-7/16            | 3/4                | 16                | 22                | 23.2                        |
| 2"     | 9-1/2             | 11-5/8            | 6-1/2             | 6-1/8             | 1                  | 24                | 28                | 34.5                        |
| 2-1/2" | 10-1/2            | 13                | 7                 | 6-3/4             | 1-1/4              | 33                | 38                | 47.3                        |
| 3"     | 12                | 14                | 8                 | 8                 | 1-1/4              | 44                | 54                | 64.8                        |
| 4"     | 14-7/8            | 17-1/16           | 10-3/4            | 10-3/4            | 1-1/4              | 85                | 110               | 127.2                       |
| 5"     | 17-3/8            | 19-1/16           | 13-1/2            | 13-1/2            | 1-1/2              | 117               | 160               | 198.7                       |
| 6"     | 21                | 21-1/16           | 16-1/4            | 16-1/4            | 1-1/2              | 174               | 224               | 286.0                       |
| 8"     | 22-1/2            | 23                | 17                | 19-1/2            | 2                  | 262               | 468               | 327.5                       |
| 10"    | 26-1/8            | 28                | 20-1/4            | 21-1/4            | 2-1/2              | 410               | 590               | 550.0                       |
| 12"    | 30-3/8            | 32-5/8            | 24                | 25                | 2-1/2              | 604               | 890               | 759.0                       |
| 14"    | 36                | 37-5/8            | 29                | 29-1/2            | 2                  | 815               | 1080              | 1052.0                      |
| 16"    | 37                | 38-15/16          | 33                | 33-1/2            | 2-1/2              | 1224              | 1800              | 1406.0                      |
| 18"    | 46                | 47-5/8            | 35-1/2            | 36-1/2            | 3                  | 1990              | 2380              | 1772.0                      |

\* Note: Dimensions shown are subject to change.

## UL Listed Cast Iron Y-Type Strainers

### 613 Series

(Apollo® International)

Size 2-1/2" through 6". Available standard or epoxy coated.

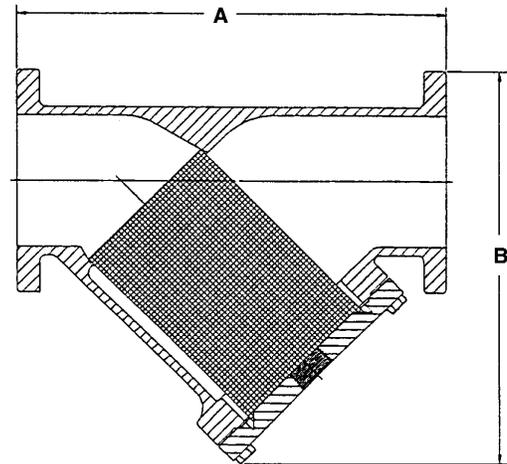
- **SIZES 2-1/2" THRU 6"**
- **OPERATING PRESSURES AND TEMPERATURES**
  - 125 lb. Flange
  - 125 psig @ 450°F. Steam
  - 200 psig @ 150°F. WOG
- **LISTING:**
  - Underwriters Laboratories Inc.® Subject #321
  - Fire Main Equipment, Strainers, "Y" Type Pipe Strainers
- **CONSTRUCTION:**
  - High-tensile ASTM A126 Class B Cast Iron with blow-off connections and self aligning cylindrical screens. May be installed in horizontal or vertical pipe lines with blow-off connection at the lower end of the screen. All have a flanged blow-off cover. A crane hook is provided on the 4" and 6" strainers to provide for lifting and supporting the unit during installation.



#### SCREEN SIZES:

|                       | Suffix |
|-----------------------|--------|
| Standard: .125 Perf.* | (-N1)  |
| Optional: .187 Perf.  | (-O1)  |
| .250 Perf.            | (-P1)  |

\*3" available in .187 or .250 Perf. only



#### Dimensional Specifications

| Size   | A      | B      | Blow-Off<br>NPT | Weight/<br>Lbs. | Screen<br>Area In <sup>2</sup> |
|--------|--------|--------|-----------------|-----------------|--------------------------------|
| 2-1/2" | 10-1/2 | 7      | 1-1/4           | 33              | 47.3                           |
| 3"     | 12     | 8      | 1-1/4           | 44              | 64.8                           |
| 4"     | 14-7/8 | 10-3/4 | 1-1/4           | 85              | 127.2                          |
| 6"     | 21     | 16-1/4 | 1-1/2           | 174             | 286.0                          |

Note: Dimensions shown are subject to change.

#### Model Numbers/Selection Information

|         |                              |
|---------|------------------------------|
| 613-2U9 | 2-1/2" Strainer              |
| 613-2U0 | 3" Strainer                  |
| 613-2UA | 4" Strainer                  |
| 613-2UC | 6" Strainer                  |
| 613-2C9 | 2-1/2" Strainer Epoxy Coated |
| 613-2C0 | 3" Strainer Epoxy Coated     |
| 613-2CA | 4" Strainer Epoxy Coated     |
| 613-2CC | 6" Strainer Epoxy Coated     |

# ● Pipeline Strainers

## Cast Ductile Iron "Y" Strainers

### C534-S Series Threaded End, Class 600 (Apollo® International)

Provides inexpensive protection for costly pumps, meters, valves and other mechanical equipment.

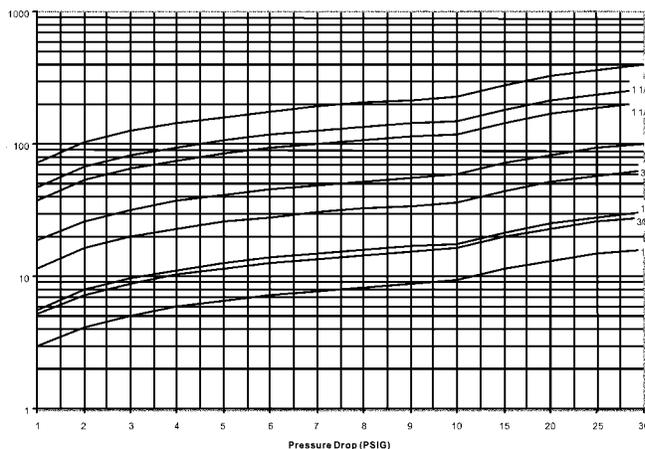
Similar to "TCG" Series but with much higher temperature and pressure ratings.

#### SIZES: 1/4" THRU 3"

- **NPT THREADED ENDS**
- **WORKING PRESSURE (Non-Shock)**  
600 psig @ 650°F. Steam • 1000 psig @ 150°F. Water, Oil, Gas
- **SELF CLEANING**  
Accomplished by opening the blow-off connection.
- **SELF ALIGNING SCREENS\*\***  
Available in 304 SS (Standard), 316 SS, Monel and Brass. All materials are available in a large variety of perforations and meshes.
- **PRESSURE DROP**  
See applicable chart on page 5.
- **NPT TAPPED BLOW-OFF CONNECTION**



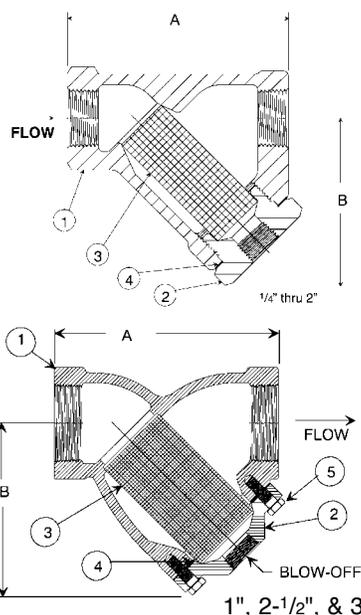
**C534-S Flow Data**



| Materials of Construction |            |                 |           |          |
|---------------------------|------------|-----------------|-----------|----------|
| No.                       | Part       | Material        | ASTM Spec | Remarks  |
| 1                         | Body       | Ductile Iron    | A395      | 60-40-18 |
| 2                         | Plug/Cover | Ductile Iron    | A395      | 60-40-18 |
| 3                         | *Screen    | Stainless Steel |           | Type 304 |
| 4                         | *Gasket    | Graphite        |           |          |
| 5                         | ***Bolting | Carbon Steel    |           | Grade 2  |

\*Recommended Spare Parts  
\*\*Screen shown is standard screen material. Contact customer service for optional materials and perforations/mesh.  
\*\*\*1", 2 1/2" & 3" only.

- **STANDARD SCREENS:\*\***  
1/4" Thru 2" - 20 Mesh/304 Stainless Steel  
2 1/2" Thru 3" - .045 Perf./304 Stainless Steel  
Contact customer service for optional materials and perforations/mesh.



#### Part Numbers

| C534-S        |                 |                 |             |
|---------------|-----------------|-----------------|-------------|
| 1/4" 612041AI | 3/4" 612044AI   | 1-1/2" 612047AI | 3" 612040LI |
| 3/8" 612042AI | 1" 612045AI     | 2" 612048AI     |             |
| 1/2" 612043AI | 1-1/4" 612046AI | 2-1/2" 612049LI |             |

| Dimensional Specifications |        |         |              |             |                             |
|----------------------------|--------|---------|--------------|-------------|-----------------------------|
| Size                       | A      | B       | Blow-Off NPT | Weight/Lbs. | Screen Area In <sup>2</sup> |
| 1/4"                       | 3-3/16 | 2-1/16  | 1/4          | 1           | 2.6                         |
| 3/8"                       | 3-3/16 | 2-1/16  | 1/4          | 1           | 2.6                         |
| 1/2"                       | 3-3/16 | 2-25/32 | 3/8          | 2-1/4       | 2.6                         |
| 3/4"                       | 3-3/4  | 3-1/16  | 3/8          | 2-3/4       | 4.9                         |
| 1"                         | 4      | 3-1/2   | 3/8          | 3           | 6.7                         |
| 1-1/4"                     | 5      | 4-3/16  | 3/4          | 7-1/2       | 11.6                        |
| 1-1/2"                     | 5-3/4  | 4-3/4   | 3/4          | 10-1/4      | 15.6                        |
| 2"                         | 7      | 5-7/8   | 1            | 17-1/2      | 23.1                        |
| 2-1/2"                     | 9-1/4  | 6-3/4   | 1            | 22          | 55.6                        |
| 3"                         | 10     | 7-7/8   | 1            | 37          | 78.4                        |

Note: Dimensions shown are subject to change.

# Magnetic Screen Assemblies For Extra Protection Against Fine Ferrous Metal Particles



Now you can get added protection for your hydraulic system, pumps and other equipment.

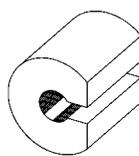
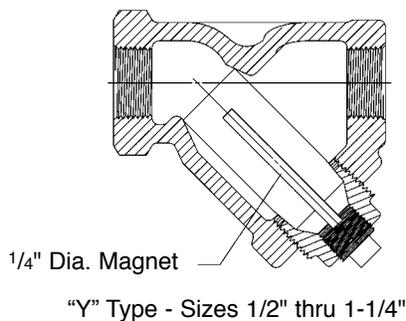
Magnetic screen assemblies prevent fine ferrous metal particles from passing through the screen and damaging bearings and other machined surfaces.

The magnets in these screen assemblies are positioned to obtain the strongest magnetic field possible, resulting in the most effective particle retention.

Magnetic screen assemblies are designed to fit all types and sizes of strainers, making it possible to easily change screens in the field to convert to magnetic strainers.

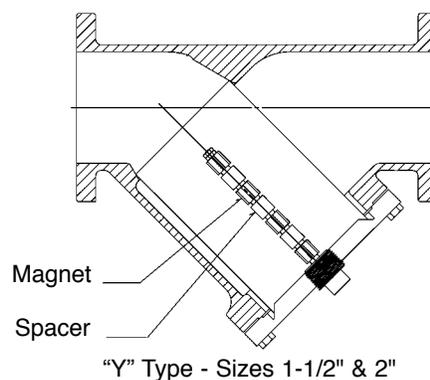
## Rod or Horseshoe Type Magnet

Example "A" - Rod Magnet



Horseshoe Type Magnet

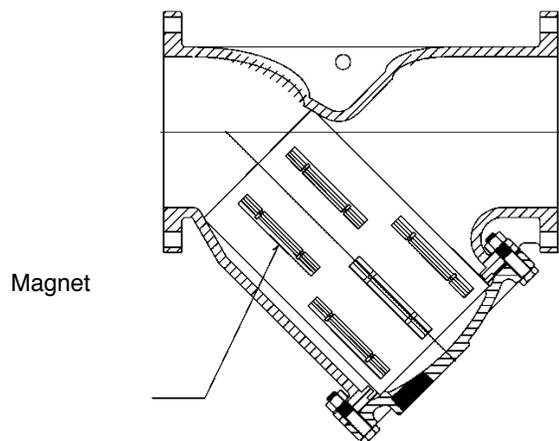
EXAMPLE "B" - HORSESHOE MAGNET



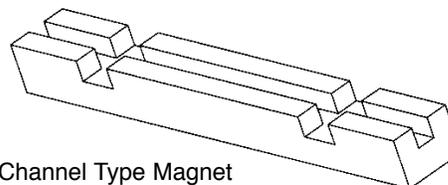
**Pipeline Strainers**

**Channel Type Magnet**

**EXAMPLE "C" - CHANNEL MAGNET**



"Y" Type - Sizes 2-1/2" thru 18"



Channel Type Magnet

|             |                | Magnet Quantity |   |       |   |   |    |    |    |    |    |    |    |    |  |
|-------------|----------------|-----------------|---|-------|---|---|----|----|----|----|----|----|----|----|--|
| Size        | 1/2 thru 1-1/4 | 1-1/2           | 2 | 2-1/2 | 3 | 4 | 5  | 6  | 8  | 10 | 12 | 14 | 16 | 18 |  |
| "Y" Type    | 1              | 4               | 6 | 3     | 3 | 4 | 10 | 12 | 12 | 12 | 16 | 20 | 24 | 32 |  |
| Basket Type |                |                 | 2 | 2     | 3 | 3 | 5  | 7  | 11 | 13 | 17 |    |    |    |  |

**Specifications**

Magnetic inserts are available on "Y" type in all body materials.

Corrosion resistant fasteners are used to assemble the magnets to the screen.

Magnets are equally spaced in each row. When two or more rows are used, the magnets are staggered.

Magnet material is Cast Alnico #5.

**Example A** - Rod magnet, "Y" type, 1/2" thru 1-1/4"

**Example B** - Horseshoe magnet, "Y" type, 1-1/2" & 2"

**Example C** - Channel magnet, "Y" type, 2-1/2" thru 18".

**Ordering Information**

These magnetic assemblies are available for all strainers, regardless of body material or end connections.

Magnetic screen assemblies are used with stainless steel screen material only.

The blow-off connection (drain) is not available on strainers that have rod or horseshoe type magnets.

When ordering, specify, "Magnetic Strainer Screen".

For other strainer information, see the appropriate strainer catalog page.

