

# Models: 91, 92, 93

## Cast Iron or Cast Bronze Compact Wafer Silent Check Valves

Sizes: 1 1/2" – 12" (40 – 300mm)

### Pressure/Temperature–Non-Shock

| Model    | Material             | Rating          |
|----------|----------------------|-----------------|
| 91,92,93 | Cast Iron,<br>Bronze | 150psi @ 150° F |

Max. temp. can be limited by seat material. Consult Factory.

Not recommended for Steam Service.



Model 91

### CAUTION

- Not for use with reciprocating compressors or pumps.
- Not for use in sewage ejector piping
- Consult factory for other specific service conditions.

### Typical Service

- Designed for liquids and gases where flow reversal can cause surge and water hammer.

### Features

- Spring closes the disc before flow reversal, preventing surge and water hammer
- Mating surfaces of the disc and seat are hand lapped for best possible sealing.
- Disc is fully guided at top and bottom to insure alignment and sealing at any installation angle.
- Disc begins to open at .5psi.
- Disc opens 1/3" per inch of line size, greater than similar competitive products, for enhanced flow.

### Construction

- Compact Wafer design for lightweight and space saving.
- Bodies are designed to accommodate 110% flow of equivalent pipe size.
- 302SS springs are standard. Many variations in material and weight are available on specification, consult factory.
- Designed to fit within ANSI bolt circles.
- Variety of trim and seat materials are available
  - See introductory pages of the Silent Check Valves section of the Mueller Steam Specialty Engineering binder for standard materials and How To Order Instructions.

### Installation

- Can be installed horizontally, vertically or at any angle.
  - Consult factory for downward vertical flow applications.
- Good piping practice recommends installing a distance of 5 to 10 pipe diameters from elbows, pumps, or others turbulence-creating devices.
- Mueller Steam Specialty strongly recommends the installation of a strainer ahead of the pump to ensure protection of both the pump and the valve from foreign particles.

### Ordering Information

- All pertinent information relating to the operating conditions for which the valve is intended should be supplied. These include operating pressure, temperature, flow rates, velocity, pump type, conveyance of corrosive fluids, etc.
- For certain applications such as pump suction or handling of volatile liquids, lighter or heavier springs may be required, consult factory.
- Barring specific information, standard springs and materials will be supplied as ordered.

### Materials

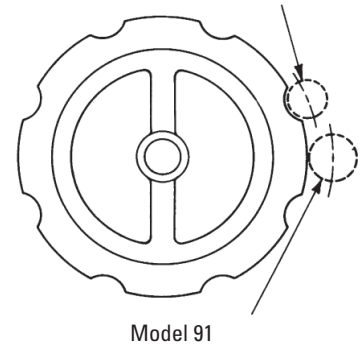
|        | 91A, 92A, 93A                  | 91B, 92B, 93B          |
|--------|--------------------------------|------------------------|
| Body   | Cast Iron ASTM A126-B          | Bronze ASTM B62        |
| Trim   | Bronze ASTM B62/316 SS         | Bronze ASTM B62/316 SS |
| Spring | 302 Stainless Steel, ASTM A276 | 302 Stainless Steel    |

## Pressure Drop

- See Technical Data Section of the Mueller Steam Specialty Engineering binder for Pressure Drop Charts and  $C_V$  values.

## Dimensions and Weights

| SIZE         |     | DIMENSIONS |     |         |         |          | WEIGHT |      |      |      |      |      |
|--------------|-----|------------|-----|---------|---------|----------|--------|------|------|------|------|------|
| FACE TO FACE |     | BOLTING    |     |         | 91AP/AT |          | 92AP   |      | 93AP |      |      |      |
| in.          | mm  | in.        | mm  | 91AP/AT | 92AP    | 93AP     | lbs.   | kgs. | lbs. | kgs. | lbs. | kgs. |
| 1½           | 40  | 2¾         | 60  | 4¾x5¼   | —       | —        | 4      | 1    | —    | —    | —    | —    |
| 2            | 50  | 2⅝         | 67  | 4⅝x5¾   | —       | —        | 5      | 2    | —    | —    | —    | —    |
| 2½           | 65  | 2⅞         | 73  | 4⅝x6    | —       | —        | 8      | 4    | —    | —    | —    | —    |
| 3            | 80  | 1⅛         | 79  | 4⅝x6½   | —       | —        | 10     | 5    | —    | —    | —    | —    |
| 4            | 100 | 4          | 102 | 8⅝x7¾   | —       | —        | 17     | 8    | —    | —    | —    | —    |
| 5            | 125 | 4⅝         | 118 | 8¾x8½   | —       | —        | 27     | 12   | —    | —    | —    | —    |
| 6            | 150 | 5⅞         | 141 | 8¾x9½   | —       | —        | 39     | 18   | —    | —    | —    | —    |
| 8            | 200 | 6½         | 165 | 483     | 8¾x10¾  | 12⅞x12¼  | —      | —    | 86   | 39   | 98   | 45   |
| 10           | 250 | 8¼         | 210 | 533     | 12⅞x13  | 16-1x14¾ | —      | —    | 159  | 72   | 170  | 77   |
| 12           | 300 | 11¼        | 286 | 597     | 24⅞x4   | —        | —      | —    | 337  | 153  | —    | —    |



Apply For Certified Drawings.

Models 91BP, 92BP, 93BP available upon request. Consult factory for weights and dimensions.

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