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**Quality from the Start**

Sinclair Collins is an ISO 9001 registered facility. Bronze and stainless steel components are machined in our own facility. All components must meet our high performance specifications and quality control standards.

After assembly, each valve is fully tested at rated pressure prior to shipment and all material and workmanship are covered by a two-year warranty.

**WARNING**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application, including consequences of any failure, and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

**Offer of Sale**

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the full "Offer of Sale".

## Valve Design

Sinclair Collins valves are designed and quality-built to provide long, trouble-free performance. They combine economical automatic operation with precision control and maximum dependability.

**THE SERIES C264, C274, C284, C294 VALVES.** These diaphragm-operated valves are produced in two basic types, hard-seat and soft-seat. The 500 psi (34 bar) hard-seat has a metal-to-metal seat and can be used in a majority of applications. In lower pressure applications where a hard-seated valve is not acceptable, the 400 psi (28 bar) soft-seated valve is recommended. This valve utilizes stainless steel-filled PTFE rings in the stems to provide bubbletight seal. Both of these valve types employ an exclusive swivel-stem design that reduces side load on the packer to assure smoother, faster operation and longer packer life. The chevron-packer is spring loaded and self-adjusting to reduce maintenance. The heat-treated stainless steel seat rings used in the hard-seat valves are skirted to provide minimum fluid by-pass and minimum shock during valve shift. In all 3-way valves, upper and lower seat rings are identical and interchangeable to simplify inventory and maintenance. Standard bodies are Navy-M bronze with stainless steel trim. Stainless steel/filler material spiral-wound gaskets are used. The valves are equipped with large or small size diaphragm actuators. The large actuator permits operation of the valve at maximum rated pressure at any port with recommended actuated air pressure of 40 psi (2.8 bar). (If lesser line pressures are handled, lesser actuating air pressure can be used). The small actuator provides some savings in space but its use reduces the usable operating pressure of the valve to the limits shown in the Model Selection Chart included on the individual catalog sheets. The large and small diaphragm actuators are interchangeable within a given size. The diaphragm assembly may be replaced with the valve under pressure but de-energized.

**THE SERIES C244 VALVES.** These diaphragm-operated 200 psi (14 bar) valves employ a single piece stem, as well as a new fixed height stem seal. The seal design has an integral spring which compensates for packer wear. Because only one seal is used, the cavity for the seal in the body is shallow and the bearing length in the body is correspondingly longer. The stainless steel upper seat cage, in addition to being drop-in, also serves as a diverter to help direct the flow through the valve. Standard bodies are cast bronze and the trim is of stainless steel. A spiral wound gasket consisting of stainless steel and filler material is also utilized to seal the upper seat. These valves are equipped with a single size diaphragm actuator per basic size. The actuator permits operation of the valve at a maximum rated pressure at any port with recommended actuating air pressure of 35 psi (2.4 bar). (If lesser line pressures are handled, lesser actuating air pressure can be used). The two piece top construction allows the diaphragm assembly to be changed in areas where head space is at a premium.

**THE SERIES C304 VALVES.** These 500 psi (34 bar) manifold mounted valves combine many of the features from the 500 psi (34 bar) hard-seated line-mounted valves with the numerous advantages of manifold mounting. These valves have spring-loaded stem packers, self-aligning stems, skirted stainless-steel seats, and bronze bodies. A cylinder operator is used for space savings. Manifold mounting simplifies original installation, reduces labor costs and saves energy by allowing piping to be insulated. The design allows for multiple valve manifolding as well as single-station installations. For in-service maintenance, the manifold valve is simply unbolted, removed and replaced in minutes.

### LUBRICATION

1. Coat Packing Rings and Packer Bore with Dow Corning III Compound.

### DIAPHRAGM REPLACEMENT

- Clean old rubber from surfaces.
- Insert all screws in cover and through diaphragm, do not elongate or re-punch holes in diaphragm.
- Assemble ring and install nuts loosely.
- Use valve piston to deform diaphragm against the cover and clamp in place.
- Tighten all nuts moderately.
- For more detailed instructions, see Bulletin H101.

"If it is possible that the ambient temperature may fall below freezing, the medium must be moisture free to prevent internal damage or unpredictable behavior."

| Torque Requirements for 400 PSI & 500 PSI<br>End Caps & Adapters |            |         |        |
|------------------------------------------------------------------|------------|---------|--------|
| Basic Valve Size                                                 | Thread     | Torque  |        |
|                                                                  |            | lb - ft | N - M  |
| 400 & 500                                                        | 1-3/8 - 12 | 22±2    | 30±3   |
| 1/2"                                                             | 1-3/4 - 12 | 95±5    | 129±7  |
| 1"                                                               | 2-1/4 - 12 | 200±10  | 271±14 |
| 1½"                                                              | 2-7/8 - 12 | 300±15  | 407±20 |

### HOW TO ORDER

Refer to the Model Selection Charts and recommended Piping Connection charts on the following pages to order valves suitable for your Cv and pipe size requirements. If a 3-way valve is desired for 2-way service, it is necessary to plug the unused port. Refer to the Piping Connection chart as a guide. Complete Parts Data Charts are included for your convenience in ordering parts.

## Valves for Steam and Hot & Cold Liquids



**500 psi  
3-Way Valve**



**500 psi  
Offset  
2-Way Valve**



**200 psi  
2-Way Valve**



**200 psi  
3-Way Valve**



**400 & 500 psi  
3-Way Valve**



**400 & 500 psi  
3-Way Manifold Valve**



**400 & 500 psi  
3-Way Valve**



**400 & 500 psi  
Inline  
2-Way Valve**

## 200 psi, 2-Way Valves

Tapped 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 3"

Use 30 to 40 psi  
(2.1 - 2.8 bar)  
Air Pressure on Top

### SPECIFICATIONS

**Media:** Steam • Hot or Cold Water • Air & Inert Gases

**Pressure:** Maximum Operating Pressure: 200 psi (14 bar)

**Temperature Range:** -40° TO 388°F (-40° TO 198°C)

These valves are designed for low pressure service and where compactness is desired. The stem and disc are machined from a single piece of stainless steel. Seat rings are stainless steel and are of drop-in variety. The upper seat which is of cage design, also serves as a diverter to help direct the flow through the valve. The stem packing consists of a single ring of glass reinforced PTFE with an integrally confined spring to eliminate the need for manual adjustments of packing. Because only one seal is used, the cavity for the seal in the body is shallow and the stem bearing length is correspondingly longer. A spiral wound gasket consisting of stainless steel and filler material is utilized to seal the upper seat.

Yoke arms are cast on the bodies to make a sturdy compact unit.

The bodies are of cast bronze. Diaphragm springs are high quality spring steel and a proprietary coating is applied for maximum corrosion resistance. These valves are equipped with a single size diaphragm actuator in each basic size. The actuator permits operation of the valve at a maximum rated pressure at any port with recommended actuating air pressure of 35 psi (2.4 bar). (If lesser line pressures are handled, lesser actuating air pressure can be used). The diaphragm actuator includes a quality reinforced-elastomer sheet that is highly resistant to elevated temperatures. Sinclair Collins diaphragm assemblies may be replaced with the valve under pressure but de-energized. The two-piece construction allows the diaphragm assembly to be changed in areas where head space is at a premium.

For dimensional data, see page 38.

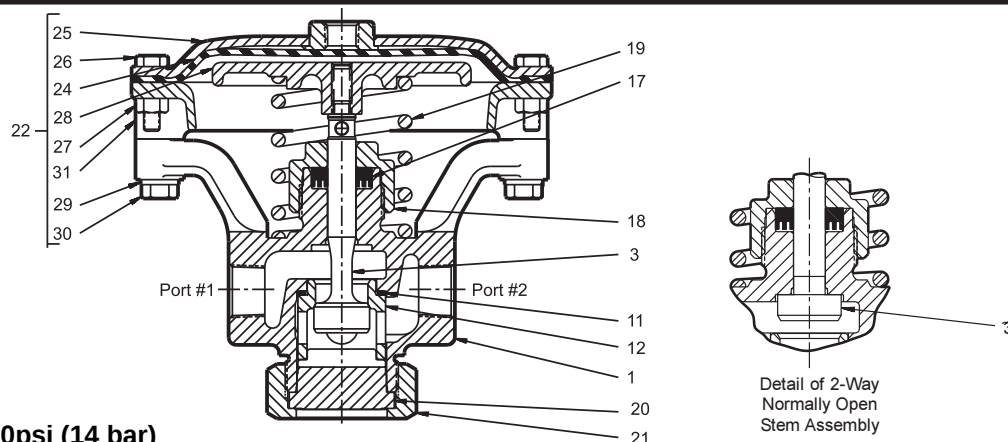
### 2-Way Normally Open

| Basic Valve Size | Port Tap (NPTF) | Model Number | Pressure Rating |     | Cv               |                  |
|------------------|-----------------|--------------|-----------------|-----|------------------|------------------|
|                  |                 |              |                 |     | Port 1 to Port 2 | Port 2 to Port 1 |
|                  |                 |              | psi             | bar |                  |                  |
| 1/2"             | 1/2"            | C244-2002    | 200             | 14  | 5.5              | 6.5              |
|                  | 3/4"            | C244-3002    | 200             | 14  | 6.9              | 7.4              |
| 1"               | 1"              | C244-4002    | 200             | 14  | 14.7             | 14.7             |
|                  | 1 1/4"          | C244-5002    | 200             | 14  | 15.5             | 16.3             |
| 1 1/2"           | 1 1/2"          | C244-6002    | 200             | 14  | 21.0             | 25.5             |
| 2"               | 2"              | C244-7002    | 200             | 14  | 47.0             | 53.0             |
|                  | 3"              | C244-9002    | 200             | 14  | 58.0             | 63.0             |

### 2-Way Normally Closed

| Basic Valve Size | Port Tap (NPTF) | Model Number | Pressure Rating |     | Cv               |                  |
|------------------|-----------------|--------------|-----------------|-----|------------------|------------------|
|                  |                 |              |                 |     | Port 1 to Port 2 | Port 2 to Port 1 |
|                  |                 |              | psi             | bar |                  |                  |
| 1/2"             | 1/2"            | C244-2001    | 200             | 14  | 6.4              | 6.0              |
|                  | 3/4"            | C244-3001    | 200             | 14  | 7.4              | 7.1              |
| 1"               | 1"              | C244-4001    | 200             | 14  | 14.5             | 13.0             |
|                  | 1 1/4"          | C244-5001    | 200             | 14  | 15.5             | 15.0             |
| 1 1/2"           | 1 1/2"          | C244-6001    | 200             | 14  | 26.0             | 23.8             |
| 2"               | 2"              | C244-7001    | 200             | 14  | 51.0             | 48.5             |
|                  | 3"              | C244-9001    | 200             | 14  | 66.0             | 58.0             |





**2-Way Normally Closed 200psi (14 bar)**

| Basic Size | 1/2"        |           | 1"        |           | 1½"       | 2"        |           | Description        |
|------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| Port Size  | 1/2" NPTF   | 3/4" NPTF | 1" NPTF   | 1¼" NPTF  | 1½" NPTF  | 2" NPTF   | 3" NPTF   |                    |
| Model No.  | C244-2001   | C244-3001 | C244-4001 | C244-5001 | C244-6001 | C244-7001 | C244-9001 |                    |
| Item No.   | Part Number |           |           |           |           |           |           |                    |
| 1          | C093-274    | C093-268  | C093-269  | C093-270  | C093-271  | C093-272  | C093-273  | Body               |
| 3          | D093-216    | D093-216  | D093-217  | D093-217  | D093-218  | D093-219  | D093-219  | Stem               |
| •11        | C383-070    | C383-070  | C383-071  | C383-071  | C383-072  | C383-073  | C383-073  | Gasket             |
| 12         | C963-151    | C963-151  | C963-152  | C963-152  | C963-153  | C963-154  | C963-154  | Seat Ring          |
| •17        | H272-02     | H272-02   | H272-03   | H272-03   | H272-04   | H272-05   | H272-05   | Seal               |
| 18         | C853-101    | C853-101  | C853-102  | C853-102  | C853-103  | C853-104  | C853-104  | Gland Nut          |
| 19         | D293-140    | D293-140  | D293-141  | D293-141  | D293-142  | D293-143  | D293-143  | Diaphragm Spring   |
| 20         | D123-048    | D123-048  | D123-049  | D123-049  | D123-050  | D123-051  | D123-051  | Stem Stop          |
| 21         | C663-010    | C663-010  | C663-024  | C663-024  | C663-037  | C663-057  | C663-057  | Union Nut          |
| 22         | C392-053    | C392-053  | C392-056  | C392-056  | C392-055  | C392-067  | C392-067  | Diaphragm Assembly |
| •24        | C333-049    | C333-049  | C333-050  | C333-050  | C333-051  | C333-066  | C333-066  | Diaphragm          |
| 25         | C293-018    | C293-018  | C293-091  | C293-091  | C293-030  | C293-044  | C293-044  | Cover              |
| 26         | H096-10     | H096-10   | H096-10   | H096-10   | H096-10   | H096-12   | H096-12   | Cap Screw          |
| 27         | H060-03     | H060-03   | H060-03   | H060-03   | H060-03   | H060-03   | H060-03   | Hex Nut            |
| 28         | C783-145    | C783-145  | C783-146  | C783-146  | C783-147  | C783-148  | C783-148  | Piston             |
| 29         | H175-16     | H175-16   | H175-21   | H175-21   | H175-21   | H175-27   | H175-27   | Lock Washer        |
| 30         | H096-32     | H096-32   | H266-39   | H266-39   | H096-52   | H097-09   | H097-09   | Cap Screw          |
| 31         | C893-050    | C893-050  | C893-048  | C893-048  | C893-022  | C893-039  | C893-039  | Ring               |

**2-Way Normally Open 200 PSI (14 bar)**

| Basic Size | ½"          |           | 1"        |           | 1½"       | 2"        |           | Description        |
|------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| Port Size  | 1/2" NPTF   | 3/4" NPTF | 1" NPTF   | 1¼" NPTF  | 1½" NPTF  | 2" NPTF   | 3" NPTF   |                    |
| Model No.  | C244-2002   | C244-3002 | C244-4002 | C244-5002 | C244-6002 | C244-7002 | C244-9002 |                    |
| Item No.   | Part Number |           |           |           |           |           |           |                    |
| 1          | C093-274    | C093-268  | C093-269  | C093-270  | C093-271  | C093-272  | C093-273  | Body               |
| 3          | D093-220    | D093-220  | D093-221  | D093-221  | D093-222  | D093-223  | D093-223  | Stem               |
| •11        | C383-070    | C383-070  | C383-071  | C383-071  | C383-072  | C383-073  | C383-073  | Gasket             |
| 12         | C963-151    | C963-151  | C963-152  | C963-152  | C963-153  | C963-154  | C963-154  | Seat Ring          |
| •17        | H272-02     | H272-02   | H272-03   | H272-03   | H272-04   | H272-05   | H272-05   | Seal               |
| 18         | C853-101    | C853-101  | C853-102  | C853-102  | C853-103  | C853-104  | C853-104  | Gland Nut          |
| 19         | D293-140    | D293-140  | D293-141  | D293-141  | D293-142  | D293-143  | D293-143  | Diaphragm Spring   |
| 20         | D123-048    | D123-048  | D123-049  | D123-049  | D123-050  | D123-051  | D123-051  | Stem Stop          |
| 21         | C663-010    | C663-010  | C663-024  | C663-024  | C663-037  | C663-057  | C663-057  | Union Nut          |
| 22         | C392-053    | C392-053  | C392-056  | C392-056  | C392-055  | C392-067  | C392-067  | Diaphragm Assembly |
| •24        | C333-049    | C333-049  | C333-050  | C333-050  | C333-051  | C333-066  | C333-066  | Diaphragm          |
| 25         | C293-018    | C293-018  | C293-091  | C293-091  | C293-030  | C293-044  | C293-044  | Cover              |
| 26         | H096-10     | H096-10   | H096-10   | H096-10   | H096-10   | H096-12   | H096-12   | Cap Screw          |
| 27         | H060-03     | H060-03   | H060-03   | H060-03   | H060-03   | H060-03   | H060-03   | Hex Nut            |
| 28         | C783-145    | C783-145  | C783-146  | C783-146  | C783-147  | C783-148  | C783-148  | Piston             |
| 29         | H175-16     | H175-16   | H175-21   | H175-21   | H175-21   | H175-27   | H175-27   | Lock Washer        |
| 30         | H096-32     | H096-32   | H266-39   | H266-39   | H096-52   | H097-09   | H097-09   | Cap Screw          |
| 31         | C893-050    | C893-050  | C893-048  | C893-048  | C893-022  | C893-039  | C893-039  | Ring               |

• SPARE PARTS



## 200 psi, 3-Way Valves

### Tapped 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 3"

#### SPECIFICATIONS

**Media:** Steam • Hot or Cold Water • Air & Inert Gases

**Pressure:** Maximum Operating Pressure: 200 psi (14 bar)

**Temperature Range:** -40° TO 388°F (-40° TO 198°C)

Use 30 to 40 psi  
(2.1 - 2.8 bar)  
Air Pressure on Top



These valves are designed for low pressure service and where compactness is desired. The stem and disc are machined from a single piece of stainless steel. Seat rings are stainless steel and are of drop-in variety. The upper seat which is of cage design, also serves as a diverter to help direct the flow through the valve.

The stem packing consists of a single ring of glass reinforced PTFE with an integrally confined spring to eliminate the need for manual adjustments of packing. Because only one seal is used, the cavity for the seal in the body is shallow and the stem bearing length is correspondingly longer. A spiral wound gasket consisting of stainless steel and filler material is utilized to seal the upper seat.

Yoke arms are cast on the bodies to make a sturdy compact unit. The bodies are of cast bronze. Diaphragm springs are high quality spring steel and a proprietary coating is applied for maximum corrosion resistance. These valves are equipped with a single size diaphragm actuator in each basic size. The actuator permits operation of the valve at a maximum rated pressure at any port with recommended actuating air pressure of 35 psi (2.4 bar). (If lesser line pressures are handled, lesser actuating air pressure can be used). The diaphragm actuator includes a quality reinforced-elastomer sheet that is highly resistant to elevated temperatures.

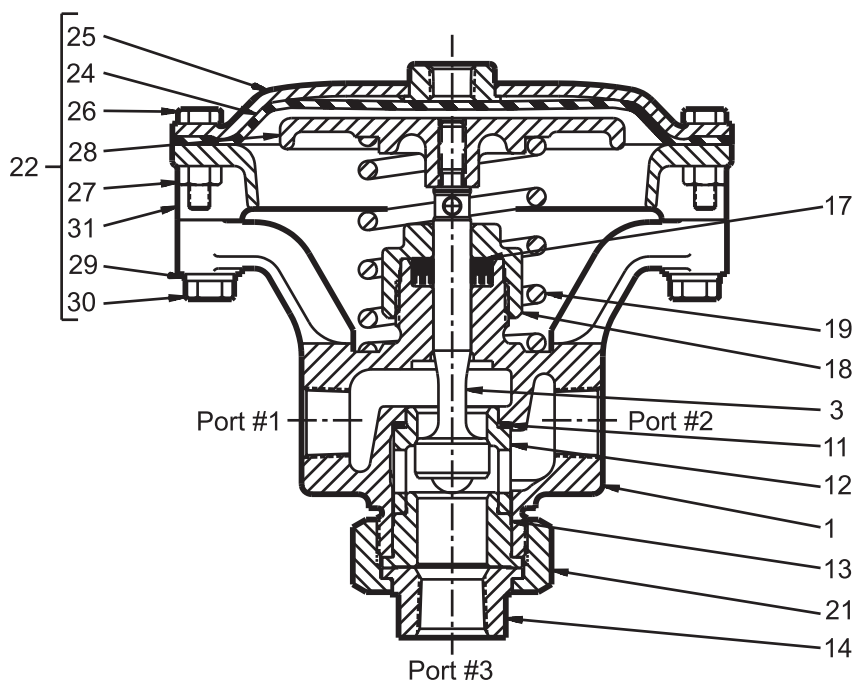
Sinclair Collins diaphragm assemblies may be replaced with the valve under pressure but de-energized. The two-piece construction allows the diaphragm assembly to be changed in areas where head space is at a premium.

For dimensional data, see page 38.

| Valve Type |                                 | Piping Connection |                      |                      |
|------------|---------------------------------|-------------------|----------------------|----------------------|
|            |                                 | Port 1            | Port 2               | Port 3               |
| 2-Way      | Normally Open<br>Angle Piped    | Plugged           | Cylinder<br>or Inlet | Inlet or<br>Cylinder |
|            | Normally Closed<br>Inline Piped | Inlet             | Cylinder             | Plugged              |
| 3-Way      | Normally Open                   | Drain             | Cylinder             | Inlet                |
|            | Normally Closed                 | Inlet             | Cylinder             | Drain                |
| 3-Port     | Directional Valve               | Outlet            | Inlet                | Outlet               |
|            | Mixing Valve                    | Inlet             | Outlet               | Inlet                |

#### 3-Way Model Selection Chart

| Basic<br>Valve<br>Size | Port<br>Tap<br>(NPTF) | Model<br>Number | Pressure Rating |     | Cv                     |                        |                        |                        |
|------------------------|-----------------------|-----------------|-----------------|-----|------------------------|------------------------|------------------------|------------------------|
|                        |                       |                 |                 |     | Port 1<br>to<br>Port 2 | Port 2<br>to<br>Port 1 | Port 2<br>to<br>Port 3 | Port 3<br>to<br>Port 2 |
|                        |                       |                 | psi             | bar |                        |                        |                        |                        |
| 1/2"                   | 1/2"                  | C244-2003       | 200             | 14  | 6.2                    | 5.9                    | 8.0                    | 8.1                    |
|                        | 3/4"                  | C244-3003       | 200             | 14  | 7.6                    | 7.3                    | 9.3                    | 9.5                    |
| 1"                     | 1"                    | C244-4003       | 200             | 14  | 14.2                   | 13.2                   | 21.2                   | 22.0                   |
|                        | 1 1/4"                | C244-5003       | 200             | 14  | 18.7                   | 18.3                   | 26.5                   | 28.0                   |
| 1 1/2"                 | 1 1/2"                | C244-6003       | 200             | 14  | 27.0                   | 23.3                   | 30.5                   | 33.0                   |
| 2"                     | 2"                    | C244-7003       | 200             | 14  | 51.5                   | 49.5                   | 71.0                   | 67.0                   |
|                        | 3"                    | C244-9003       | 200             | 14  | 63.0                   | 58.0                   | 74.0                   | 90.0                   |



**3-Way 200 psi (14 bar)**

| Basic Size | 1/2"        |           | 1"        |           | 1½"       | 2"        |           | Description        |
|------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| Port Size  | 1/2" NPTF   | 3/4" NPTF | 1" NPTF   | 1¼" NPTF  | 1½" NPTF  | 2" NPTF   | 3" NPTF   |                    |
| Model No.  | C244-2003   | C244-3003 | C244-4003 | C244-5003 | C244-6003 | C244-7003 | C244-9003 |                    |
| Item No.   | Part Number |           |           |           |           |           |           |                    |
| 1          | C093-274    | C093-268  | C093-269  | C093-270  | C093-271  | C093-272  | C093-273  | Body               |
| 3          | D093-216    | D093-216  | D093-217  | D093-217  | D093-218  | D093-219  | D093-219  | Stem               |
| •11        | C383-070    | C383-070  | C383-071  | C383-071  | C383-072  | C383-073  | C383-073  | Gasket             |
| 12         | C963-151    | C963-151  | C963-152  | C963-152  | C963-153  | C963-154  | C963-154  | Seat Ring          |
| 13         | C973-058    | C973-058  | C973-059  | C973-059  | C973-060  | C973-061  | C973-061  | Lower Seat         |
| 14         | C773-032    | C773-004  | C773-033  | C773-016  | C773-019  | C773-034  | C773-021  | Pipe Union         |
| •17        | H272-02     | H272-02   | H272-03   | H272-03   | H272-04   | H272-05   | H272-05   | Seal               |
| 18         | C853-101    | C853-101  | C853-102  | C853-102  | C853-103  | C853-104  | C853-104  | Gland Nut          |
| 19         | D293-140    | D293-140  | D293-141  | D293-141  | D293-142  | D293-143  | D293-143  | Diaphragm Spring   |
| 21         | C663-010    | C663-010  | C663-024  | C663-024  | C663-037  | C663-057  | C663-057  | Union Nut          |
| 22         | C392-053    | C392-053  | C392-056  | C392-056  | C392-055  | C392-067  | C392-067  | Diaphragm Assembly |
| •24        | C333-049    | C333-049  | C333-050  | C333-050  | C333-051  | C333-066  | C333-066  | Diaphragm          |
| 25         | C293-018    | C293-018  | C293-091  | C293-091  | C293-030  | C293-044  | C293-044  | Cover              |
| 26         | H096-10     | H096-10   | H096-10   | H096-10   | H096-10   | H096-12   | H096-12   | Cap Screw          |
| 27         | H060-03     | H060-03   | H060-03   | H060-03   | H060-03   | H060-03   | H060-03   | Hex Nut            |
| 28         | C783-145    | C783-145  | C783-146  | C783-146  | C783-147  | C783-148  | C783-148  | Piston             |
| 29         | H175-16     | H175-16   | H175-21   | H175-21   | H175-21   | H175-27   | H175-27   | Lock Washer        |
| 30         | H096-32     | H096-32   | H266-39   | H266-39   | H096-52   | H097-09   | H097-09   | Cap Screw          |
| 31         | C893-050    | C893-050  | C893-048  | C893-048  | C893-022  | C893-039  | C893-039  | Ring               |

• **SPARE PARTS**

## 200 psi, 2-Way, Hard Seated with Throttling Orifice

### SPECIFICATIONS

**Media:** Steam • Hot or Cold Water • Air & Inert Gases

**Pressure:** Maximum Operating Pressure: 200 psi (14 bar)

**Temperature Range:** -40° TO 388°F (-40° TO 198°C)

These valves are designed the same as the C244 Series valves. The seat ring is solid with a specially drilled orifice. They are widely used to purge water from the steam heating systems of automatic presses. The range of orifice sizes available for this valve permits selection of the exact size required to purge the system of water quickly without excessive loss of pressure. The diaphragm operator provides a simple and dependable means of automatically controlling the process.

These valves are designed for low pressure service and where compactness is desired. The stem and disc are machined from a single piece of stainless steel. Seat rings are stainless steel and are drop-in variety. The upper seat, which is of cage design, also serves as a diverter to help direct the flow through the valve.

The stem packing consists of a single ring of glass reinforced PTFE with an integrally confined spring to eliminate the need for manual adjustments of packing. Because only one seal is used, the cavity for the seal in the body is shallow and the stem bearing length is correspondingly longer. A spiral wound gasket consisting of stainless steel and filler material is utilized to seal the upper seat.

Yoke arms are cast on the bodies to make a sturdy compact unit. The bodies are of cast Navy-M bronze. Diaphragm springs are high quality spring steel and a proprietary coating is applied for maximum corrosion resistance.

These valves are equipped with a single size diaphragm actuator in each basic size. The actuator permits operation of the valve at a maximum rated pressure at any port with recommended actuating air pressure of 35 psi (2.4bar).

This basic 1/2" valve is available with 1/8", 3/16", 1/4", 5/16" or 3/8" throttling orifice. If 1/2" orifice area is required, order valve Model No. C244-2001 on page 6.

2WNC Valves may be ported backwards with the media pressure piped to Port No. 2. This brings the pressure under the seat, removing the stem packing from continuous pressure.

The diaphragm actuator includes a quality reinforced-elastomer sheet that is highly resistant to elevated temperatures. The actuator may be replaced with the valve under pressure but de-energized.

**For dimensional data, see page 38.**

Use 30 to 40 psi  
(2.1 - 2.8 bar)  
Air Pressure on Top



### Model Selection Chart

| Port Tap<br>(NPTF) | Description              | Orifice Size<br>(Approx.) | Model<br>Number | Pressure Rating |     | Cv<br>Port 1 to<br>Port 2 |
|--------------------|--------------------------|---------------------------|-----------------|-----------------|-----|---------------------------|
|                    |                          |                           |                 | psi             | bar |                           |
| 1/2"               | 2-Way Normally<br>Closed | 1/8                       | C374-2001       | 200             | 14  | 1.73                      |
|                    |                          | 3/16                      | C374-2002       | 200             | 14  | 2.00                      |
|                    |                          | 1/4                       | C374-2003       | 200             | 14  | 2.48                      |
|                    |                          | 5/16                      | C374-2004       | 200             | 14  | 3.05                      |
|                    |                          | 3/8                       | C374-2005       | 200             | 14  | 3.53                      |