

The 200RB is a pilot-operated, 2-way, normally closed valve. 200RB valves are used for liquid, discharge, or suction gas refrigerant service.

## Features

- One coil fits all valve sizes
- Extended ends for easy installation (standard)
- Long-life molded coils
- PTFE O-ring for superior external sealing

## Options

- Available in 8 orifice sizes
- Manual stem or mounting stud
- Bi-Flow operation-conversion either factory assembled or with kit (except 200RB 7,9 & 12)



## Specifications

- Maximum fluid temperature: 250°F
- Maximum working pressure: 500 psig
- Minimum operating pressure drop: 2 psi
- MOPD: 300 psig
- UL/CUL file number: MP604

**NOTE:** Mounting enclosing tube more than 90° off vertical up position is not recommended.

## Nomenclature example: 200RB 4T3M VLC

| 200R         | B             | 4                    | T                                                                             | 3                         | M                                               | VLC   |
|--------------|---------------|----------------------|-------------------------------------------------------------------------------|---------------------------|-------------------------------------------------|-------|
| Valve Series | Design Series | Port Size (in 1/16") | Connection Type<br>F = SAE<br>S = ODF<br>P = NPTF<br>T = Copper Extended Ends | Connection Size (in 1/8") | M = manual stem<br>T = mounting stud (optional) | Coil* |

\*NOTE: Valves are shipped without the solenoid coils (VLC = Valve Less Coil). See coil assemblies for availability.

## Ordering Information and Nominal\* Liquid Capacity Table – Tons (kW)

| PCN            |                            |                          | Description  | Connection Size   | R-12        | R-134a      | R-22         | R-407C       | R-404A/R-507 | R-502       |
|----------------|----------------------------|--------------------------|--------------|-------------------|-------------|-------------|--------------|--------------|--------------|-------------|
| Standard Valve | Mounting Stud <sup>1</sup> | Manual Stem <sup>2</sup> |              |                   |             |             |              |              |              |             |
| 053104         | --                         | N/A                      | 200RB 2 F 2  | 1/4 SAE           | 2.3 (8.1)   | 2.7 (9.5)   | 3.6 (12.7)   | 3.4 (12.0)   | 1.9 (6.7)    | 1.9 (6.7)   |
| 062611         | --                         | N/A                      | 200RB 2 F 3  | 3/8 SAE           |             |             |              |              |              |             |
| 053105         | 053236                     | N/A                      | 200RB 2 T 2  | 1/4 ODF           |             |             |              |              |              |             |
| 053106         | 054170                     | N/A                      | 200RB 2 T 3  | 3/8 ODF           |             |             |              |              |              |             |
| 052725         | --                         | --                       | 200RB 3 F 2  | 1/4 SAE           | 3.0 (10.6)  | 3.6 (12.7)  | 4.8 (16.9)   | 4.5 (15.8)   | 2.5 (8.8)    | 2.6 (9.1)   |
| 052726         | 056438                     | --                       | 200RB 3 F 3  | 3/8 SAE           |             |             |              |              |              |             |
| 052727         | 055855                     | --                       | 200RB 3 F 4  | 1/2 SAE           |             |             |              |              |              |             |
| 049608         | --                         | --                       | 200RB 3 T 2  | 1/4 ODF           |             |             |              |              |              |             |
| 049609         | 049585                     | 065620                   | 200RB 3 T 3  | 3/8 ODF           | 5.0 (17.6)  | 6.0 (21.1)  | 8.0 (28.1)   | 7.5 (26.4)   | 4.2 (14.8)   | 4.2 (14.8)  |
| 049692         | --                         | 065621                   | 200RB 3 T 4  | 1/2 ODF           |             |             |              |              |              |             |
| 047506         | 047508                     | 047507                   | 200RB 4 F 3  | 3/8 SAE           |             |             |              |              |              |             |
| 059728         | 047510                     | 047509                   | 200RB 4 P 3  | 3/8 NPTF          |             |             |              |              |              |             |
| 047511         | 047513                     | 047512                   | 200RB 4 S 3  | 3/8 ODF X 1/2 ODM | 5.2 (18.3)  | 6.2 (21.8)  | 8.2 (28.8)   | 7.7 (27.1)   | 4.3 (15.1)   | 4.5 (15.8)  |
| 047516         | 047515                     | 047514                   | 200RB 4 S 4  | 1/2 ODF X 5/8 ODM |             |             |              |              |              |             |
| 047517         | 049162                     | 049186                   | 200RB 4 T 3  | 3/8 ODF           |             |             |              |              |              |             |
| 047518         | 049163                     | 049187                   | 200RB 4 T 4  | 1/2 ODF           |             |             |              |              |              |             |
| 058950         | 058045                     | 056518                   | 200RB 4 T 5  | 5/8 ODF           | 6.0 (21.1)  | 7.2 (25.3)  | 9.5 (33.4)   | 8.9 (31.3)   | 5.0 (17.6)   | 5.1 (17.9)  |
| 047519         | 047521                     | 047520                   | 200RB 5 F 4  | 1/2 SAE           |             |             |              |              |              |             |
| 059729         | 047523                     | 047522                   | 200RB 5 F 5  | 5/8 SAE           |             |             |              |              |              |             |
| 047524         | 047526                     | 047525                   | 200RB 5 S 4  | 1/2 ODF X 5/8 ODM |             |             |              |              |              |             |
| 049201         | 047528                     | 047527                   | 200RB 5 S 5  | 5/8 ODF           | 10.8 (38.0) | 12.7 (44.7) | 17.0 (59.8)  | 16.2 (57.0)  | 9.1 (32.0)   | 9.2 (32.4)  |
| 061227         | 054323                     | --                       | 200RB 5 T 3  | 3/8 ODF           |             |             |              |              |              |             |
| 057206         | 049164                     | 049188                   | 200RB 5 T 4  | 1/2 ODF           |             |             |              |              |              |             |
| 059730         | 049165                     | 049189                   | 200RB 5 T 5  | 5/8 ODF           |             |             |              |              |              |             |
| 059731         | 047531                     | 047530                   | 200RB 6 F 4  | 1/2 SAE           | 19.6 (68.9) | 23.6 (83.0) | 30.5 (107.3) | 29.0 (102.0) | 16.4 (57.7)  | 16.2 (57.0) |
| 059732         | 047534                     | 047533                   | 200RB 6 F 5  | 5/8 SAE           |             |             |              |              |              |             |
| 059733         | 047536                     | 047535                   | 200RB 6 P 3  | 3/8 NPTF          |             |             |              |              |              |             |
| 047537         | 047539                     | 047538                   | 200RB 6 S 4  | 1/2 ODF X 5/8 ODM |             |             |              |              |              |             |
| 047540         | 047542                     | 047541                   | 200RB 6 S 5  | 5/8 ODF           | 22.5 (79.1) | 27.1 (95.3) | 34.9 (122.7) | 33.2 (116.8) | 18.8 (66.1)  | 18.5 (65.1) |
| 047544         | 047546                     | 047545                   | 200RB 6 T 4  | 1/2 ODF           |             |             |              |              |              |             |
| 056766         | 047548                     | 047547                   | 200RB 6 T 5  | 5/8 ODF           |             |             |              |              |              |             |
| 064037         | --                         | --                       | 200RB 7 S 5  | 5/8 ODF X 7/8 ODM |             |             |              |              |              |             |
| 064062         | --                         | --                       | 200RB 7 T 4  | 1/2 ODF           | 19.6 (68.9) | 23.6 (83.0) | 30.5 (107.3) | 29.0 (102.0) | 16.4 (57.7)  | 16.2 (57.0) |
| 064063         | 064562                     | 064267                   | 200RB 7 T 5  | 5/8 ODF           |             |             |              |              |              |             |
| 064282         | 064284                     | 064283                   | 200RB 7 T 7  | 7/8 ODF           |             |             |              |              |              |             |
| 064762         | 064764                     | 064763                   | 200RB 9 T 5  | 5/8 ODF           |             |             |              |              |              |             |
| 064645         | 064766                     | 064765                   | 200RB 9 T 7  | 7/8 ODF           | 22.5 (79.1) | 27.1 (95.3) | 34.9 (122.7) | 33.2 (116.8) | 18.8 (66.1)  | 18.5 (65.1) |
| 064767         | 064769                     | 064768                   | 200RB 9 T 9  | 1 1/8 ODF         |             |             |              |              |              |             |
| 064818         | 064820                     | 064819                   | 200RB 12 T 7 | 7/8 ODF           |             |             |              |              |              |             |
| 064821         | 064823                     | 064822                   | 200RB 12 T 9 | 1 1/8 ODF         |             |             |              |              |              |             |

<sup>1</sup> Add "T" to the end of description for Mounting Stud

<sup>2</sup> Add "M" to the end of the description for Manual Stem

Capacities based on 100°F liquid and 40°F saturated evaporator per ARI standard 760-87.

All ratings are based on largest connection size.

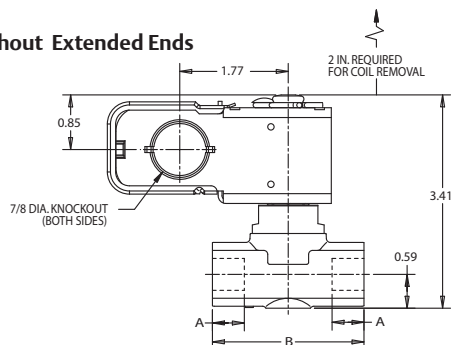
\*See Extended Capacity Tables for ratings at a wide range of conditions.

## Ordering Information and Nominal Liquid Capacity Table for Bi-Flow Solenoids - Tons (kW)

| PCN            |               |             | Description         | Connection Size | R-12       | R-134a     | R-22        | R-407C     | R-404A/R-507 | R-502      |
|----------------|---------------|-------------|---------------------|-----------------|------------|------------|-------------|------------|--------------|------------|
| Standard Valve | Mounting Stud | Manual Stem |                     |                 |            |            |             |            |              |            |
| 009689         | --            | --          | 200RB GS-1925 3 T 3 | 3/8 ODF         | 3.7 (13.0) | 4.4 (15.6) | 4.8 (17.0)  | 4.5 (16.0) | 3.2 (11.3)   | 3.1 (11.0) |
| 009690         | --            | --          | 200RB GS-1926 4 T 3 | 3/8 ODF         | 4.4 (15.6) | 5.3 (18.6) | 5.6 (19.8)  | 5.3 (18.8) | 3.7 (13.1)   | 3.6 (12.7) |
| 009692         | --            | --          | 200RB GS-1928 5 T 4 | 1/2 ODF         | 6.5 (23.0) | 7.8 (27.7) | 8.2 (29.0)  | 7.8 (27.6) | 54. (19.1)   | 5.3 (18.8) |
| 009693         | --            | --          | 200RB GS-1929 5 T 5 | 5/8 ODF         |            |            |             |            |              |            |
| 009694         | --            | --          | 200RB GS-1930 6 T 5 | 5/8 ODF         | 7.8 (27.7) | 9.4 (33.4) | 10.0 (35.4) | 9.5 (33.6) | 6.5 (23.0)   | 6.5 (23.0) |

## 200RB2-6 Dimensional Data (in)

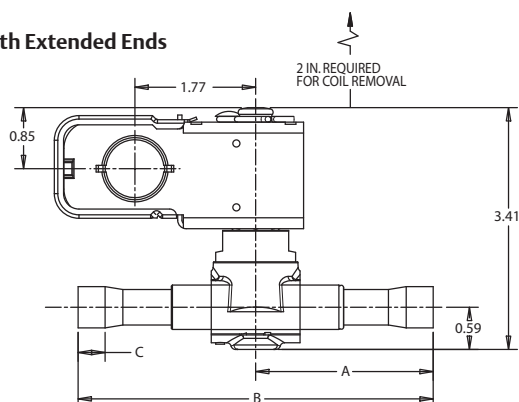
## Without Extended Ends



## Without Extended Ends

| Valve     | Port Size | Conn. Size & Style   | A    | B    |
|-----------|-----------|----------------------|------|------|
| 200RB 4P2 | 1/4       | 1/4 NPTF             | -    | 2.37 |
| 200RB 4P3 |           | 3/8 NPTF             |      |      |
| 200RB 4S3 |           | 3/8 ODF x 1/2 ODM    | 0.50 |      |
| 200RB 4S4 |           | 1/2 ODF x 5/8 ODM    | 0.56 |      |
| 200RB 4F3 | 5/16      | 3/8 SAE (male flare) | -    | 3.12 |
| 200RB 5P3 |           | 3/8 NPTF             |      |      |
| 200RB 5S4 |           | 1/2 ODF x 5/8 ODM    | 0.56 | 2.37 |
| 200RB 5S5 |           | 5/8 ODF              |      |      |
| 200RB 5F4 | 3/8       | 1/2 SAE (male flare) | -    | 3.50 |
| 200RB 5F5 |           | 5/8 SAE (male flare) |      |      |
| 200RB 6P3 |           | 3/8 NPTF             | 0.56 | 2.37 |
| 200RB 6S4 |           | 1/2 ODF x 5/8 ODM    |      |      |
| 200RB 6S5 | 3/8       | 5/8 ODF              | -    | 3.50 |
| 200RB 6F4 |           | 1/2 SAE (male flare) |      |      |
| 200RB 6F5 |           | 5/8 SAE (male flare) |      |      |

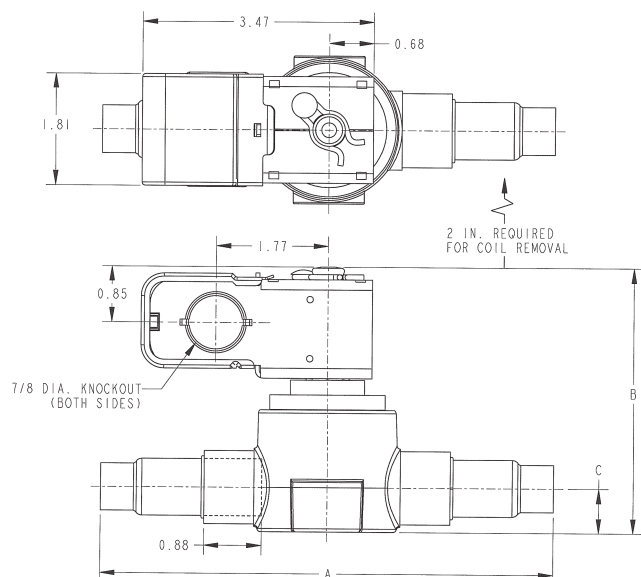
## With Extended Ends



## With Extended Ends

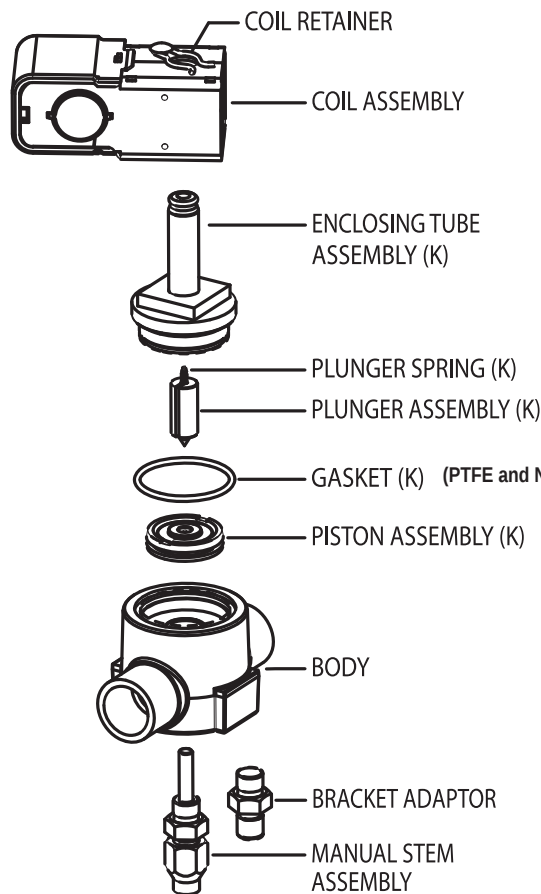
| Valve     | Port Size | Conn. Size & Style | A    | B    | C    |
|-----------|-----------|--------------------|------|------|------|
| 200RB 2T2 | 1/8       | 1/4 ODF            | 2.42 | 4.62 | 0.25 |
| 200RB 2T3 |           | 3/8 ODF            |      |      | 0.31 |
| 200RB 3T2 | 3/16      | 1/4 ODF            |      |      | 0.25 |
| 200RB 3T3 |           | 3/8 ODF            |      |      | 0.31 |
| 200RB 3T4 | 1/4       | 1/2 ODF            | 2.50 | 5.00 | 0.38 |
| 200RB 4T5 |           | 5/8 ODF            |      |      | 0.50 |
| 200RB 5T3 | 5/16      | 3/8 ODF            | 2.31 | 4.62 | 0.31 |
| 200RB 5T4 |           | 1/2 ODF            | 2.50 | 5.00 | 0.38 |
| 200RB 5T5 |           | 5/8 ODF            | 3.25 | 6.50 | 0.50 |
| 200RB 6T3 | 3/8       | 3/8 ODF            | 2.31 | 4.62 | 0.31 |
| 200RB 6T4 |           | 1/2 ODF            | 2.50 | 5.00 | 0.38 |
| 200RB 6T5 |           | 5/8 ODF            | 3.25 | 6.50 | 0.50 |

## 200RB7, 9 and 12 Dimensional Data (in)



| Valve     | Port Size | Conn. Size & Style    | A    | B    | C    |
|-----------|-----------|-----------------------|------|------|------|
| 200RB7S5  | 7/16      | 5/8 ODF x 7/8 ODM     | 2.98 | 3.69 | 0.53 |
| 200RB7T5  |           | 5/8 ODF x 5/8 ODF     | 6.88 |      |      |
| 200RB7T7  |           | 7/8 ODF x 7/8 ODF     | 7.13 |      |      |
| 200RB9T5  | 9/16      | 5/8 ODF x 5/8 ODF     | 6.88 | 4.05 | 0.68 |
| 200RB9T6  |           | 3/4 ODF x 3/4 ODF     | 7.38 |      |      |
| 200RB9T7  |           | 7/8 ODF x 7/8 ODF     | 7.13 |      |      |
| 200RB9T9  | 3/4       | 1 1/8 ODF x 1 1/8 ODF | 8.50 | 4.05 | 0.68 |
| 200RB12T7 |           | 7/8 ODF x 7/8 ODF     | 7.50 |      |      |
| 200RB12T9 |           | 1 1/8 ODF x 1 1/8 ODF | 8.50 |      |      |

### Exploded View & Parts Kit Data



**Valve Repair Kit**  
"K" indicates part is supplied in  
valve repair kit **KS30386**. (PCN 066223)

**Gasket Kit**  
Gasket Kit **KG10025** (PCN 049190)  
(contains 12 pieces - each of  
PTFE and neoprene O-rings)

**Coil Assembly**  
See coil assemblies for availability.

Replace with same  
gasket color and material;  
discard other

### Valve Kits

| Valve   | Complete Kit | PCN    | Manual Opening Kit | PCN    | Bi-Flow Kit | PCN    | Gasket Kit | PCN    |
|---------|--------------|--------|--------------------|--------|-------------|--------|------------|--------|
| 200RB2  | KS30386      | 066223 | N/A                | N/A    | KS30387     | 066224 | KG10025    | 049190 |
| 200RB3  | KS30386      | 066223 | KS30377            | 065695 | KS30387     | 066224 | KG10025    | 049190 |
| 200RB4  | KS30386      | 066223 | KS30117            | 053959 | KS30387     | 066224 | KG10025    | 049190 |
| 200RB5  | KS30386      | 066223 | KS30117            | 053959 | KS30387     | 066224 | KG10025    | 049190 |
| 200RB6  | KS30386      | 066223 | KS30117            | 053959 | KS30387     | 066224 | KG10025    | 049190 |
| 200RB7  | KS30354      | 064263 | KS30361            | 064831 | N/A         | N/A    | KG00002    | 064262 |
| 200RB9  | KS30362      | 064825 | KS30364            | 064832 | N/A         | N/A    | KG00003    | 064830 |
| 200RB12 | KS30365      | 064826 | KS30364            | 064832 | N/A         | N/A    | KG00004    | 064833 |

### 200RB Bi-Flow Conversion

Standard 200RB uni-directional valves can be converted to Bi-Flow operation by replacing the internal parts with the components in kit KS30387 (PCN 066224). Unlike the standard valve which permits flow in one direction only when energized, the Bi-Flow version allows the valve to flow in either direction, depending on differential pressures, when energized. If the valve is not energized when flowing in the reverse direction, valve "flutter" will occur. Also, with the valve de-energized, a higher downstream pressure than upstream (back-flow) will force the valve open.

**NOTE: A 200RB7, 200RB9 and 200RB12 cannot be converted to a Bi-Flow valve.**