

The B-series with strainer series is a balanced ported valve. Typical applications include: refrigerated cases, coolers, freezers, ice machines and air conditioning systems that operate over widely varying operating conditions. This valve series also features a removable inlet strainer.



## Features

- Stainless steel power element eliminates corrosion and prevents valve failure
- Removable inlet strainer assembly
- Balanced port design compensates for changes in operating pressures due to varying ambients or widely varying evaporator loads
- Hermetic, leak-free construction
- Solid copper ODF connections, angle style only

## Options

- Adjustable and non-adjustable configurations
- Ratings from 1/2 to 6 tons

## Specifications

- Maximum Working Pressure: 450 psig

## Nomenclature example: BAESB 1/2 HC 5 FT 3/8 x 1/2 ODF

| B                                      | A   | E   | S   | B  | 1/2   | H  | CA  | 5 FT  | 3/8 x 1/2  | ODF                                    |
|--|---|---|---|--|---|--|---|---|--|--|
| <b>Valve Series</b>                    | <b>Superheat Adjustment</b><br>A = Adjustable | <b>Equalizer</b><br>E=External<br>(Omit for Internal) | <b>Strainer</b><br>Removable Inlet Screen | <b>Bleed Hole (optional)</b><br>(Omit for no bleed hole) | <b>Capacity</b><br>Nominal Rating in Tons<br>(See nominal capacity table below) | <b>Refrigerant Code</b><br>+F = R-12<br>• H = R-22<br>+M = R-134a<br>• N = R-407C<br>*P = R-507<br>*R = R-502<br>*S = R-404A | <b>Charge Code</b><br>C = medium temp<br>CA = heat pump<br>W(MOP) = press. limiting<br>Z = low temp | <b>Capillary Tube Length</b><br>30 IN (std) &<br>5 FT (std) | <b>Inlet x Outlet Connection Sizes</b><br>1/4 x 3/8<br>3/8 x 1/2<br>1/2 x 5/8<br>5/8 x 7/8 | <b>Connection Type</b><br>ODF = solder |
| Hermetic<br>Balanced<br>Port<br>Design | N = Non-Adjustable                            |   |   |  |   |  |   |   |  |  |

- + = R-12 and R-134a are interchangeable refrigerant charges
- \* = R-507, R-502 and R-404A are interchangeable refrigerant charges
- = R-22 and R-407C are interchangeable refrigerant charges

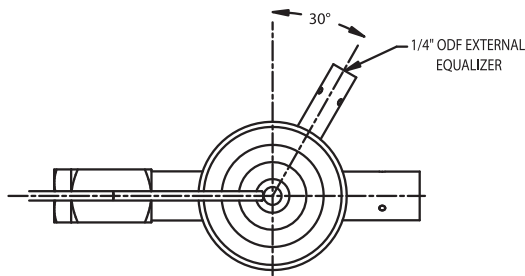
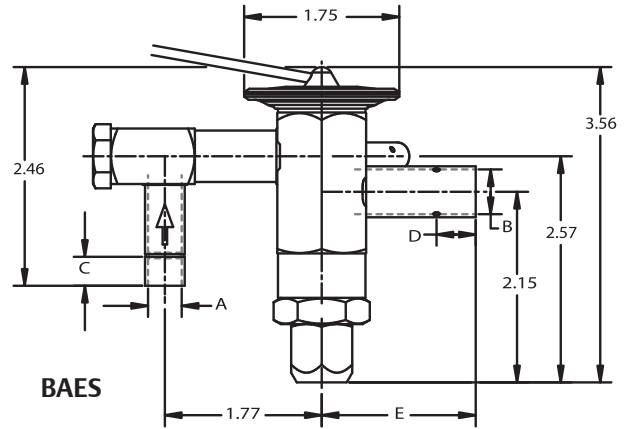
## B Series with Strainer – Nominal\* Capacity Table in Tons (kW)

| R-12      | R-134a    | R-22/R-407C | R-502/R-507/R-404A |
|-----------|-----------|-------------|--------------------|
| 1/4 (0.9) | 1/2 (1.8) | 1/2 (1.8)   | 1/4 (0.9)          |
| 1/2 (1.8) | 3/4       | 1 (3.5)     | 1/2 (1.8)          |
| 1 (3.5)   | 1 (3.5)   | 1½ (5.3)    | 1 (3.5)            |
| 1¼ (4.4)  | 1½ (5.3)  | 2 (7.0)     | 1¼ (4.4)           |
| 1½ (5.3)  | 2 (7.0)   | 2½ (9.0)    | 1½ (5.3)           |
| 2 (7.0)   | 2¼ (8.0)  | 3 (11.0)    | 2 (7.0)            |
| 2½ (9.0)  | 3 (11.0)  | 4 (14.0)    | 2½ (9.0)           |
| 3 (11.0)  | 3½ (12.0) | 5 (17.0)    | 3 (11.0)           |
| 3½ (12.0) | 4 (15.0)  | 6 (21.0)    | 4 (14.0)           |

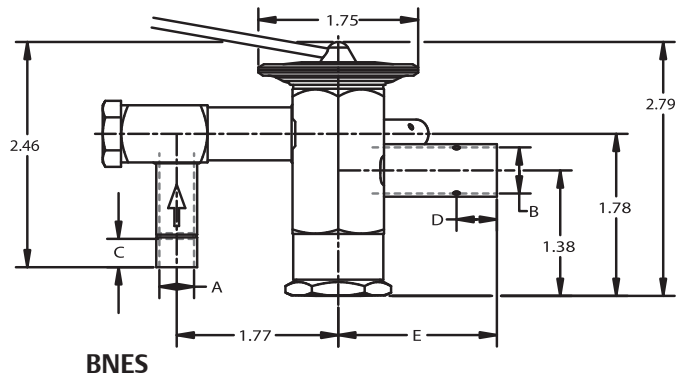
All capacities shown are at 100°F condensing, 40°F evaporator temperature.  
\*See Extended Capacity Tables for ratings at a wide range of conditions per ARI standard 750.

## BAES/BNES Dimensional Data (in) ODF Connections, Angle Style Only

| Connection Size |         | A    | B    | C MIN         | D MIN | E    |
|-----------------|---------|------|------|---------------|-------|------|
| Inlet           | Outlet  |      |      |               |       |      |
| 1/4 ODF         | 3/8 ODF | 0.25 | 0.38 | 0.31          | 0.32  | 1.73 |
| 1/4 ODF         | 1/2 ODF | 0.25 | 0.50 | 0.31          | 0.41  | 1.73 |
| 1/4 ODF         | 5/8 ODF | 0.25 | 0.63 | 0.31          | 0.50  | 1.75 |
| 3/8 ODF         | 3/8 ODF | 0.38 | 0.38 | 0.32          | 0.32  | 1.73 |
| 3/8 ODF         | 1/2 ODF | 0.38 | 0.50 | 0.32          | 0.41  | 1.73 |
| 3/8 ODF         | 5/8 ODF | 0.38 | 0.63 | 0.32 <td 0.50 | 1.75  |      |
| 3/8 ODF         | 7/8 ODF | 0.38 | 0.88 | 0.32          | 0.62  | 1.73 |
| 1/2 ODF         | 1/2 ODF | 0.50 | 0.50 | 0.41          | 0.41  | 1.73 |
| 1/2 ODF         | 5/8 ODF | 0.50 | 0.63 | 0.41          | 0.50  | 1.75 |
| 1/2 ODF         | 7/8 ODF | 0.50 | 0.88 | 0.41          | 0.62  | 1.73 |



ODF  
Top View  
Showing External Equalizer Location



BNES

## Remote Bulb Tubing Length 30" or 5' Standard

| BAES & BNES Remote Bulb Dimensions                                      |          |        |
|---|----------|--------|
| Refrigerant Charge  | Diameter | Length |
| HCA, NCA, HAA   | 0.75     | 2.38   |
| MC, MZ, MW (MOP),<br>RW (MOP) RC, SC, SZ,<br>SW (MOP), PC, PZ, PW (MOP) | 0.50     | 2.13   |

## Ordering Information (BAES Only)

| Refrigerant              | Series | Tons* | Charge | Connections       | Cap Tube | PCN    |
|--------------------------|--------|-------|--------|-------------------|----------|--------|
| R-134a<br>R-12           | BAES   | 1/2   | MC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064244 |
|                          |        | 3/4   | MC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064245 |
|                          |        | 1     | MC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064246 |
|                          |        | 1-1/2 | MC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064247 |
|                          |        | 2     | MC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064248 |
|                          |        | 3     | MC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064250 |
| R-22<br>R-407C           | BAES   | 1/2   | HC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064235 |
|                          |        | 1     | HC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064236 |
|                          |        | 1-1/2 | HC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064237 |
|                          |        | 2     | HC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064238 |
|                          |        | 2-1/2 | HC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064239 |
|                          |        | 3     | HC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064240 |
|                          |        | 4     | HC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064241 |
|                          |        | 5     | HC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064242 |
| R-404A<br>R-507<br>R-502 | BAES   | 1/4   | SC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064137 |
|                          |        |       | SZ     | 3/8 X 1/2 ODF ANG | 30 IN    | 064295 |
|                          |        | 1/2   | SC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064138 |
|                          |        |       | SZ     | 3/8 X 1/2 ODF ANG | 30 IN    | 064144 |
|                          |        | 1     | SC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064139 |
|                          |        |       | SZ     | 3/8 X 1/2 ODF ANG | 30 IN    | 064145 |
|                          |        | 1-1/4 | SC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064140 |
|                          |        |       | SZ     | 3/8 X 1/2 ODF ANG | 30 IN    | 064146 |
|                          |        | 1-1/2 | SC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064141 |
|                          |        |       | SZ     | 3/8 X 1/2 ODF ANG | 30 IN    | 064273 |
|                          |        | 2     | SC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064142 |
|                          |        |       | SZ     | 3/8 X 1/2 ODF ANG | 30 IN    | 064537 |
|                          |        | 2-1/2 | SC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064280 |
|                          |        |       | SZ     | 3/8 X 1/2 ODF ANG | 30 IN    | 064434 |
|                          |        | 3     | SC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064281 |
|                          |        |       | SZ     | 3/8 X 1/2 ODF ANG | 30 IN    | 064538 |
|                          |        | 4     | SC     | 3/8 X 1/2 ODF ANG | 30 IN    | 064460 |
|                          |        |       | SZ     | 3/8 X 1/2 ODF ANG | 30 IN    | 064780 |

\* For interchangeable refrigerant charges R-134a/R-12, R-404A/R-507/R-502, and R-22/R-407C, the tons of capacity shown in the table are for the first (primary) refrigerant listed. Consult the Nominal Capacity Table for determining the tons of capacity for the secondary refrigerants listed.

**Example:** A 1/4 ton R-12 valve is required. What R-134a ton valve should be selected?

**Solution:** From the Nominal Capacity Table, a 1/2 ton R-134a valve is equivalent to a 1/4 ton R-12 valve.