

CASH VALVES CRYOGENIC VALVES AND CONTROLS

B PRESSURE REDUCING OR PRESSURE BUILD-UP SERVICE

Construction

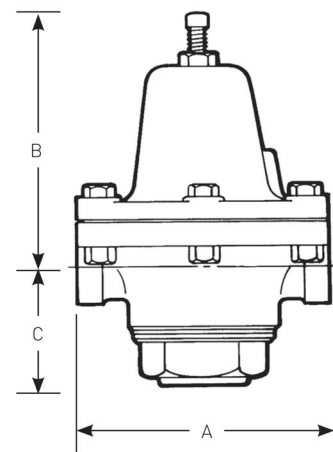
Bronze body, spring chamber, trim and diaphragms; PTFE seat and diaphragm gasket; stainless steel pressure spring; stainless steel bolts and nuts; PTFE bottom-plug gasket; Monel® strainer screen. All parts are commercially cleaned for cryogenic service. Also available with BSP threads.

Temperature rating: +150°F to -320°F (339K to 78K)
 Maximum initial pressure: 400 psi (28.12 kg/cm²)

Note: Type B95 available in stainless steel construction ½" thru 1" (15 to 25 mm) size.

REDUCED PRESSURE RANGES

| Valve size | | Maximum working ranges | |
|------------|------|------------------------|---------------|
| Inches | (mm) | psi | (kg/sq cm) |
| ¼ | (8) | 10-30 | (0.70-2.11) |
| | | 25-100 | (1.76-7.03) |
| | | 50-200 | (3.52-14.06) |
| | | 100-250 | (7.03-17.58) |
| ¾ | (10) | 10-50 | (0.70-3.52) |
| | | 40-150 | (2.81-10.55) |
| | | 100-250 | (7.03-17.58) |
| ½ | (15) | 10-30 | (0.70-2.11) |
| | | 20-75 | (1.41-5.27) |
| | | 25-125 | (1.76-8.79) |
| | | 100-200 | (7.03-14.06) |
| | | 150-250 | (10.55-17.58) |
| ¾ | (20) | 10-30 | (0.70-2.11) |
| | | 20-70 | (1.41-4.92) |
| | | 30-100 | (2.11-7.03) |
| | | 50-150 | (3.52-10.55) |
| | | 100-225 | (7.03-15.82) |
| | | 150-250 | (10.55-17.58) |
| 1 | (25) | 10-35 | (0.70-2.46) |
| | | 20-60 | (1.41-4.22) |
| | | 50-100 | (3.52-7.03) |
| | | 100-250 | (7.03-17.58) |
| 1¼ | (32) | 10-30 | (0.70-2.11) |
| | | 20-40 | (1.41-2.81) |
| | | 35-80 | (2.46-5.62) |
| | | 75-150 | (5.27-10.55) |
| 1½ | (40) | 10-30 | (0.70-2.11) |
| | | 20-40 | (1.41-2.81) |
| | | 35-80 | (2.46-5.62) |
| | | 75-150 | (5.27-10.55) |
| 2 | (50) | 5-20 | (0.35-1.41) |
| | | 10-50 | (0.70-3.52) |
| | | 20-100 | (1.41-7.03) |



DIMENSIONS

| Size | | Dimensions | | | | | | Shipping weight | |
|--------|------|------------|----------|--------|----------|--------|---------|-----------------|---------|
| inches | (mm) | A | | B | | C | | lbs | (kgs) |
| | | inches | (mm) | inches | (mm) | inches | (mm) | | |
| ¼ | (8) | 3 | (76.2) | 2½ | (73.03) | 1¾ | (44.45) | 3 | (1.35) |
| ¾ | (10) | 3¾ | (98.43) | 4½ | (104.78) | 1¾ | (44.45) | 5½ | (2.47) |
| ½ | (15) | 4½ | (114.3) | 4½ | (114.3) | 2½ | (53.98) | 8 | (3.6) |
| ¾ | (20) | 5½ | (130.18) | 4¾ | (117.48) | 2½ | (53.98) | 10 | (4.5) |
| 1 | (25) | 5¾ | (149.23) | 5¾ | (136.53) | 2¾ | (66.68) | 16 | (7.2) |
| 1¼ | (32) | 6¾ | (171.45) | 6½ | (155.58) | 2¾ | (66.68) | 20 | (9.0) |
| 1½ | (40) | 6¾ | (171.45) | 6½ | (155.58) | 3¼ | (82.55) | 20 | (9.0) |
| 2 | (50) | 9¼ | (234.95) | 8½ | (215.9) | 3½ | (88.90) | 37 | (16.65) |

CASH VALVES CRYOGENIC VALVES AND CONTROLS

TYPE B SELECTION GUIDE

| Example | B | Z | A | C | S | S | Z | T | S | 01 | - | E | 1 |
|--|---|---|---|---|---|---|---|---|---|----|---|---|---|
| Model | | | | | | | | | | | | | |
| B B valve | | | | | | | | | | | | | |
| Material of construction | | | | | | | | | | | | | |
| Z Bronze | | | | | | | | | | | | | |
| Valve size | | | | | | | | | | | | | |
| A ¼" | | | | | | | | | | | | | |
| B ⅜" | | | | | | | | | | | | | |
| C ½" | | | | | | | | | | | | | |
| D ¾" | | | | | | | | | | | | | |
| E 1" | | | | | | | | | | | | | |
| F 1¼" | | | | | | | | | | | | | |
| G 1½" | | | | | | | | | | | | | |
| H 2" | | | | | | | | | | | | | |
| Service | | | | | | | | | | | | | |
| C Cryogenic | | | | | | | | | | | | | |
| F Final line gas [O ₂ clean adder required] | | | | | | | | | | | | | |
| Body style/connection style | | | | | | | | | | | | | |
| S Side inlet/side outlet - straight thru w/ NPT connections | | | | | | | | | | | | | |
| B Side inlet/side outlet - straight thru w/ BSPT connections | | | | | | | | | | | | | |
| C Side inlet/side outlet - straight thru w/ copper tube connections [⅜" only] | | | | | | | | | | | | | |
| Spring chamber style | | | | | | | | | | | | | |
| S Standard | | | | | | | | | | | | | |
| D w/ pressure screw cap and differential connection | | | | | | | | | | | | | |
| Diaphragm material | | | | | | | | | | | | | |
| B Buna-N (final line) | | | | | | | | | | | | | |
| Z Bronze (cryo) | | | | | | | | | | | | | |
| Seat material | | | | | | | | | | | | | |
| B Buna-N (final line) | | | | | | | | | | | | | |
| T Teflon (cryo) | | | | | | | | | | | | | |
| Pressure screw style | | | | | | | | | | | | | |
| S Standard | | | | | | | | | | | | | |
| Variation | | | | | | | | | | | | | |
| 01 Standard | | | | | | | | | | | | | |
| Design revision | | | | | | | | | | | | | |
| (-) Indicates original design | | | | | | | | | | | | | |
| Spring material | | | | | | | | | | | | | |
| D Steel (final line gas) | | | | | | | | | | | | | |
| E SST (cryo) | | | | | | | | | | | | | |
| Spring range | | | | | | | | | | | | | |
| Refer to table below | | | | | | | | | | | | | |

STANDARD SPRING RANGES (psig)

| Spring Material | Size | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------|----------|---------|----------|-----------|-----------|-----------|-----------|
| SST | ¼" | 10 - 30 | 25 - 100 | 50 - 200 | 100 - 250 | ---- | ---- |
| | ⅜" | 10 - 50 | 40 - 150 | 100 - 250 | ---- | ---- | ---- |
| | ½" | 10 - 30 | 20 - 75 | 25 - 125 | 100 - 200 | 150 - 250 | ---- |
| | ¾" | 10 - 30 | 20 - 70 | 30 - 100 | 50 - 150 | 100 - 225 | 150 - 250 |
| | 1" | 10 - 35 | 20 - 60 | 50 - 100 | 50 - 150 | 100 - 250 | ---- |
| | 1¼", 1½" | 10 - 30 | 20 - 40 | 35 - 80 | 75 - 150 | ---- | ---- |
| Steel | 2" | 5 - 20 | 10 - 50 | 20 - 100 | ---- | ---- | ---- |
| | ¼" | 2 - 25 | 20 - 60 | 30 - 100 | 50 - 150 | ---- | ---- |
| | ⅜" | 2 - 30 | 20 - 70 | 40 - 110 | 90 - 150 | ---- | ---- |
| | ½" | 2 - 30 | 10 - 50 | 30 - 125 | 50 - 150 | ---- | ---- |
| | ¾" | 2 - 20 | 10 - 35 | 30 - 75 | 50 - 110 | 105 - 150 | ---- |
| | 1" | 2 - 20 | 10 - 45 | 20 - 60 | 55 - 100 | 90 - 150 | ---- |
| | 1¼", 1½" | 2 - 15 | 10 - 30 | 20 - 50 | 45 - 100 | 90 - 150 | ---- |
| 2" | 2 - 20 | 10 - 60 | 20 - 100 | 90 - 150 | ---- | ---- | |

CASH VALVES CRYOGENIC VALVES AND CONTROLS

TYPE B95 SELECTION GUIDE

| Example: | B95 | G | C | C | S | S | G | T | S | 01 | - | E | 1 |
|------------------------------------|---|---|---|---|---|---|---|---|---|----|---|---|---|
| Model | | | | | | | | | | | | | |
| B95 | B95 valve | | | | | | | | | | | | |
| Material of construction | 316 SST body and chamber | | | | | | | | | | | | |
| Valve size | | | | | | | | | | | | | |
| C | 1/2" | | | | | | | | | | | | |
| D | 3/4" | | | | | | | | | | | | |
| E | 1" | | | | | | | | | | | | |
| Service | Cryogenic | | | | | | | | | | | | |
| Body style/connection style | Side inlet/side outlet - straight thru w/ NPT connections | | | | | | | | | | | | |
| Spring chamber style | Standard | | | | | | | | | | | | |
| S | w/ pressure screw cap and differential connection | | | | | | | | | | | | |
| Diaphragm material | 316 SST (cryo) | | | | | | | | | | | | |
| Seat material | Teflon (cryo) | | | | | | | | | | | | |
| Pressure screw style | Standard | | | | | | | | | | | | |
| S | | | | | | | | | | | | | |
| Variation | Standard | | | | | | | | | | | | |
| 01 | | | | | | | | | | | | | |
| Design revision | Indicates original design | | | | | | | | | | | | |
| (-) | | | | | | | | | | | | | |
| Spring material | Stainless steel | | | | | | | | | | | | |
| E | | | | | | | | | | | | | |
| Spring range | Refer to table below | | | | | | | | | | | | |

STANDARD SPRING RANGES (psig)

| Spring Material | Size | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----------------|------|---------|---------|----------|-----------|-----------|-----------|-----------|
| SST | 1/2" | 10 - 30 | 20 - 75 | 25 - 125 | 100 - 200 | 150 - 250 | 250 - 400 | 200 - 600 |
| | 3/4" | 10 - 30 | 20 - 70 | 30 - 100 | 50 - 150 | 100 - 225 | 150 - 250 | ---- |
| | 1" | 10 - 35 | 20 - 60 | 50 - 100 | 50 - 150 | 100 - 250 | 200 - 400 | ---- |