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SERIES B VALVES

WEROSA[®]

BULLETIN
B-2003

AIR VALVES FOR INDUSTRY SINCE 1949



Two-Way Types for bleeding pilots of larger valves, for bleeding cylinders or small pressure systems, operating air tools or motors, opening or closing air lines.

Three-Way Types for controlling pilots or diaphragms of larger valves or small cylinders...or any pressure system that is alternately pressurized and exhausted.

Service: Pneumatic-vacuum to 200 psi (14 bar). Two-way can be used for hydraulic pressures to 500 psi.

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- Pilot, Manual, and Mechanical Actuation
- Plunger travels only 3/16"
- Full 3/16" Flow Area
- All Brass Bodies and Stainless Steel Plunger
- Service: Pneumatic-vacuum to 200 psi. Two-way can be used for hydraulic pressures to 500 psi.
- Leakproof: Uses standard "O" ring seals; fluorocarbon and low temperature seals available
- High C_v; (Normally Closed: 0.6, Normally Open: 0.5)
- Available with 1/8" NPT Threaded Ports in Valve Body or with Gasketed Ports for Subplate or Manifold Mounting. (See page 7)

Note: All Series "B" valves utilize the basic design and parts of the button-operated types shown below. Basic dimensions and parts lists shown on page 7. Those parts listed and dimensions shown for specific valve types, are required in addition to or in place of the basic parts and dimensions shown on page 7.

PLAIN BUTTON



Not Panel Mounting



Panel Mounting

WITHOUT GUARD: For palm, finger, knee, or straight-line mechanical operation. Can also be cam actuated if cam rise is gradual. Aluminum button is 3/16" above valve body, the distance required for full actuation. Nominal operating force is 3.75 lb. + .05 times line pressure.

| Without Button Guard | Normally Closed | | Normally Open | |
|----------------------|-----------------|----------------|---------------|----------------|
| | Panel Mtg. | Not Panel Mtg. | Panel Mtg. | Not Panel Mtg. |
| TWO-WAY | BIK-2209-P | BIK-2209 | BIK-2207-P | BIK-2207 |
| THREE-WAY | BIK-3209-P | BIK-3209 | BIK-3207-P | BIK-3207 |

Suffix Options:

- 67 Stainless steel button
- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body (and nuts where applicable), brass internals and aluminum button electroless nickel plated.
- S Strong spring for applications with marginal lubrication.



Not Panel Mounting



Panel Mounting

WITH GUARD: For fingertip or straight-line mechanical operation. Button is flush with extended guard to protect against accidental actuation. Aluminum button travels 3/16" for full actuation. Nominal operating force is 3.75 lb. + .05 times line pressure.

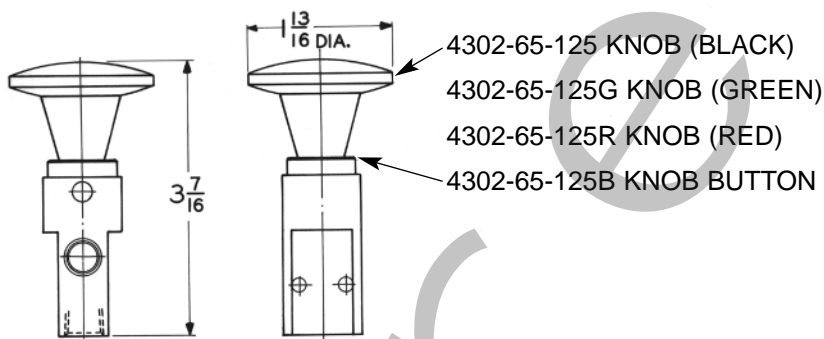
| With Button Guard | Normally Closed | | Normally Open | |
|-------------------|-----------------|----------------|---------------|----------------|
| | Panel Mtg. | Not Panel Mtg. | Panel Mtg. | Not Panel Mtg. |
| TWO-WAY | BIK-2208-P | BIK-2208 | BIK-2206-P | BIK-2206 |
| THREE-WAY | BIK-3208-P | BIK-3208 | BIK-3206-P | BIK-3206 |

Suffix Options:

- 67 Stainless steel button
- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body (and nuts where applicable), brass internals and aluminum button electroless nickel plated.
- S Strong spring for applications with marginal lubrication.



PALM BUTTON



Large-diameter black plastic button is standard, for comfortable operation. Green Knob or Red Knob is available. See suffix options below. Nominal operating force is 3.75 lb. + .05 times line pressure.

| Palm Button | Normally Closed | | Normally Open | |
|-------------|-----------------|----------------|----------------|----------------|
| | Panel Mtg.* | Not Panel Mtg. | Panel Mtg.* | Not Panel Mtg. |
| TWO-WAY | BIK-2208-P-25B | BIK-2208-25B | BIK-2206-P-25B | BIK-2206-25B |
| THREE-WAY | BIK-3208-P-25B | BIK-3208-25B | BIK-3206-P-25B | BIK-3206-25B |

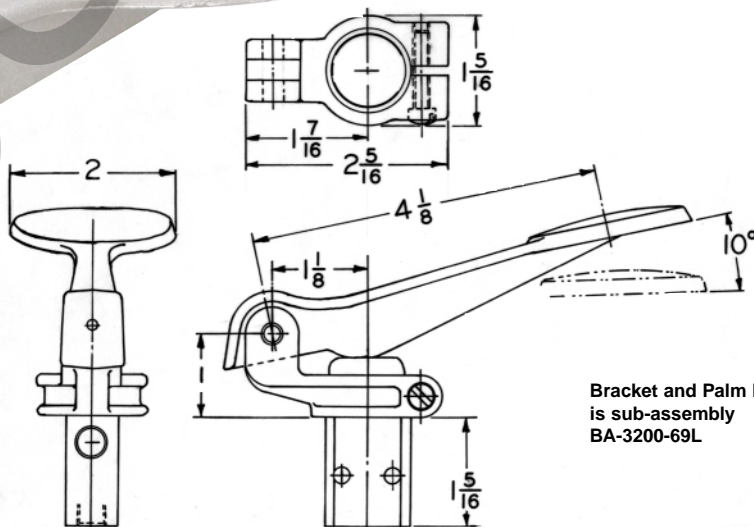
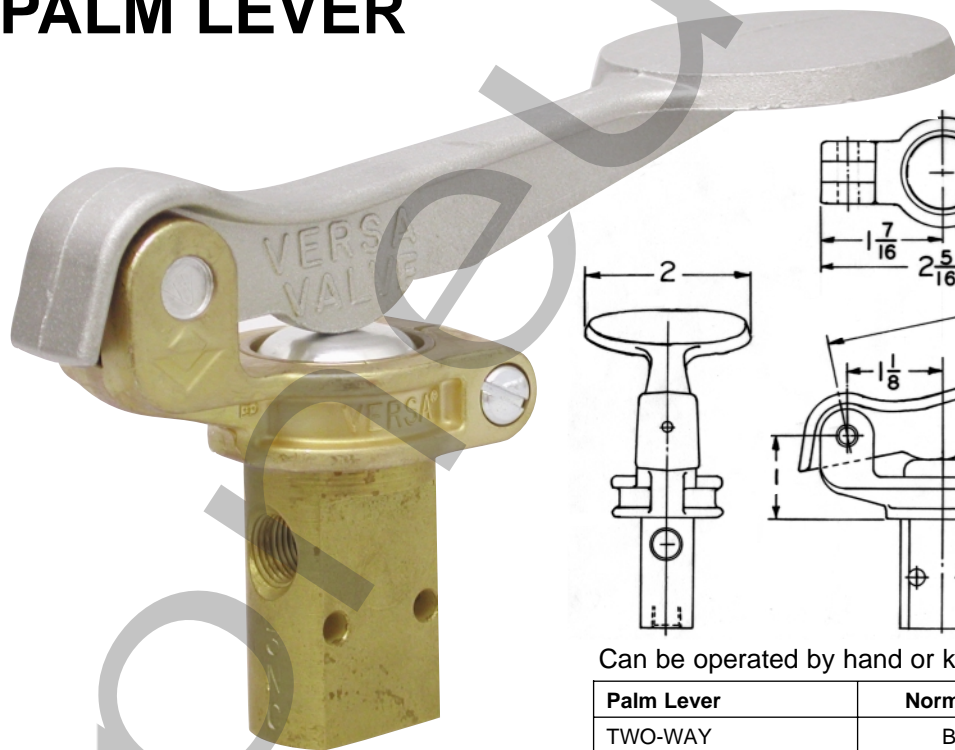
Green knob or red knob is available. See Suffix options below.

Suffix Options:

- 25BG Green Knob
- 25BR Red Knob
- 67 Stainless steel button
- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body (and nuts where applicable), brass internals and aluminum button 2209-03-25B are electroless nickel plated.
- S Strong spring for applications with marginal lubrication.

*See page 7 for panel Mtg. dimensions.

PALM LEVER



Bracket and Palm Lever is sub-assembly BA-3200-69L

Can be operated by hand or knee. A light touch is sufficient.

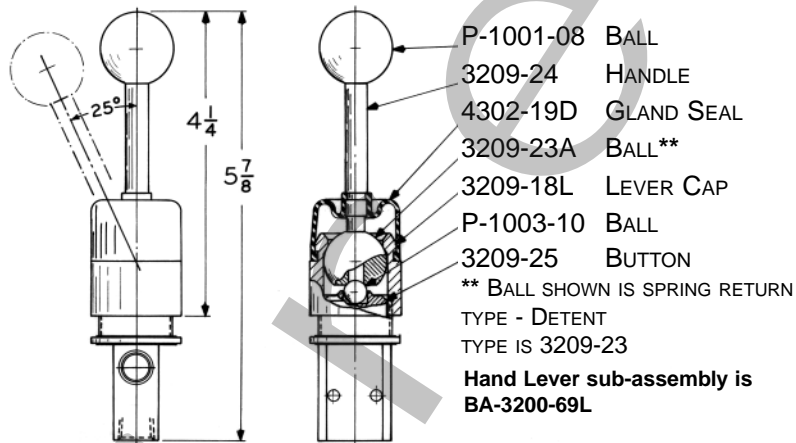
| Palm Lever | Normally Closed | Normally Open |
|------------|-----------------|---------------|
| TWO-WAY | BLK-2208 | BLK-2206 |
| THREE-WAY | BLK-3208 | BLK-3206 |

Suffix Options:

- 67 Stainless steel button
- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body, brass internals, and aluminum button are electroless nickel plated.
- S Strong spring for applications with marginal lubrication.



HAND LEVER



Light force, offsetting the handle 25° from vertical, is sufficient to operate
SPRING RETURN: Remains actuated only while handle is held in offset position.

| Hand Lever (Spring Return) | Normally Closed | Normally Open |
|----------------------------|-----------------|---------------|
| TWO-WAY | BHS-2208 | BHS-2206 |
| THREE-WAY | BHS-3208 | BHS-3206 |

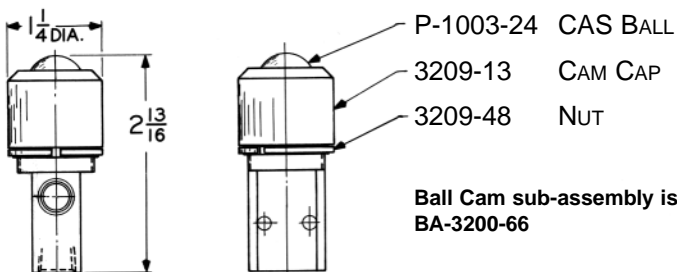
DETENTED: Once offset, handle will stay in position, springs back when pushed slightly out of position.

| Hand Lever (Detented) | Normally Closed | Normally Open |
|-----------------------|-----------------|---------------|
| TWO-WAY | BHK-2208-S | BHK-2206-S |
| THREE-WAY | BHK-3208-S | BHK-3206-S |

Suffix Options:

- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body, brass internals, lever cap are electroless nickel plated.
- S Strong spring for applications with marginal lubrication. Std on detented type.

BALL CAM



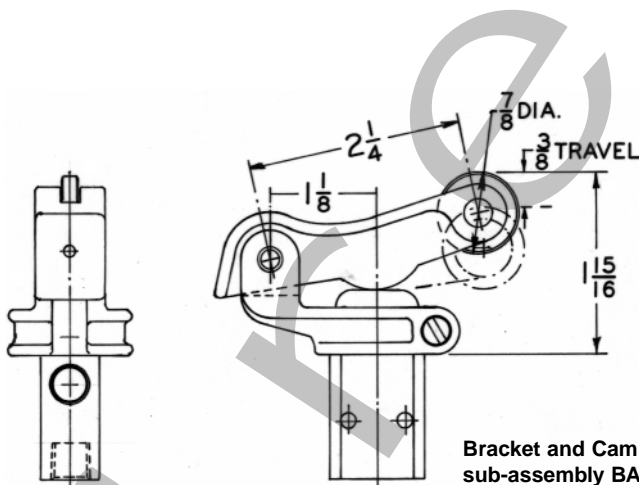
Can be operated by a cam or machine member from any angle, but pressure angle should not exceed 20° from vertical center line. Cam follower is hardened chrome alloy steel.

| Ball Cam | Normally Closed | Normally Open |
|-----------|-----------------|---------------|
| TWO-WAY | BIK-2208-66 | BIK-2206-66 |
| THREE-WAY | BIK-3208-66 | BIK-3206-66 |

Suffix Options:

- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body, brass internals, cam cap are electroless nickel plated.
- S Strong spring for applications with marginal lubrication.

CAM LEVER



Bracket and Cam Lever is sub-assembly BA-3200-40

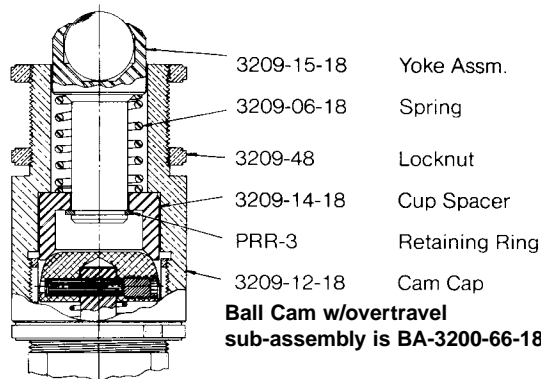
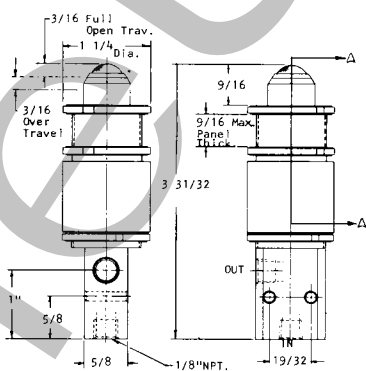
Actuated by cam movement in either direction. Cam follower is hardened.

| Cam Lever | Normally Closed | Normally Open |
|-----------|-----------------|---------------|
| TWO-WAY | BCK-2208 | BCK-2206 |
| THREE-WAY | BCK-3208 | BCK-3206 |

Suffix Options:

- 67 Stainless steel button
- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body, brass internals, bracket and aluminum button are plated with electroless nickel.
- S Strong spring for applications with marginal lubrication.

BALL CAM WITH OVERTRAVEL



Ball Cam w/overtavel sub-assembly is BA-3200-66-18

Can be operated by a cam or machine member. Has 3/16" overtravel after full actuation. This valve can be panel mounted. Pressure angle should not exceed 15° from vertical center line. Cam follower is hardened 430F stainless steel.

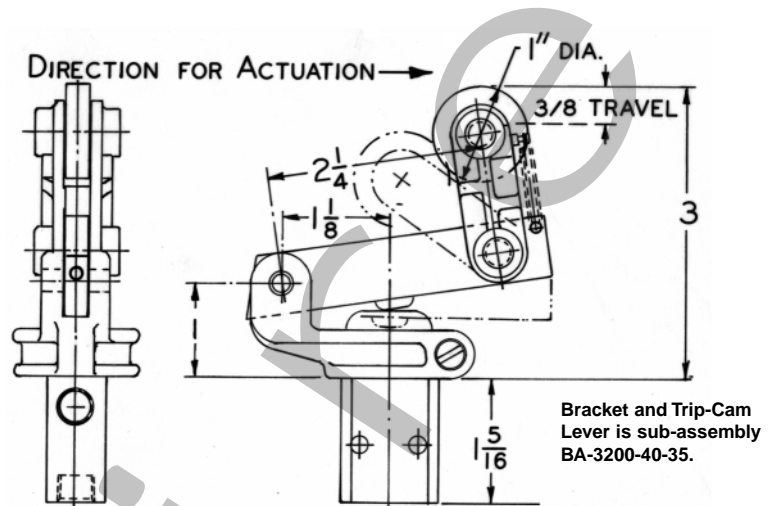
| Ball Cam With Overtravel | Normally Closed | Normally Open |
|--------------------------|-----------------|----------------|
| TWO-WAY | BIK-2208-66-18 | BIK-2206-66-18 |
| THREE-WAY | BIK-3208-66-18 | BIK-3206-66-18 |

Suffix Options:

- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body, brass internals, cam cap are electroless nickel plated.
- S Strong spring for applications with marginal lubrication..



TRIP-CAM LEVER



Actuated by cam travel in one direction only. Overriding device prevents actuation on return stroke. Cam follower is hardened.

| Trip-Cam Lever | Normally Closed | Normally Open |
|----------------|-----------------|---------------|
| TWO-WAY | BCK-2208-35 | BCK-2206-35 |
| THREE-WAY | BCK-3208-35 | BCK-3206-35 |

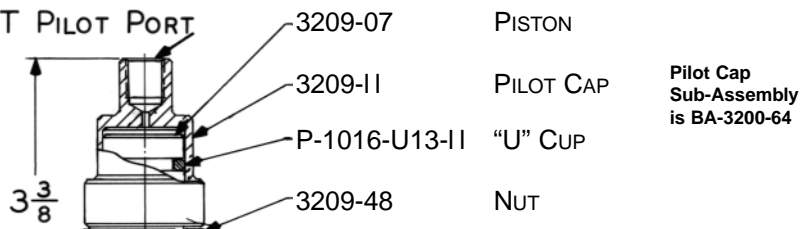
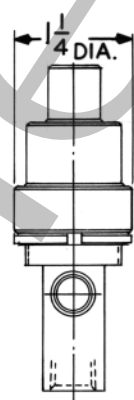
Suffix Options:

- 67 Stainless steel button
- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body, brass internals, bracket and aluminum button are plated with electroless nickel.
- S Strong spring for applications with marginal lubrication.

PILOT



Controlled by a low-pressure signal applied to a small pilot piston integrated into the valve. This actuates the valve. When the pressure is exhausted, the valve returns to the unactuated position. Pilot medium is separate from medium being controlled.



| Pilot | Normally Closed | Normally Open |
|-----------|-----------------|---------------|
| TWO-WAY | BPS-2208 | BPS-2206 |
| THREE-WAY | BPS-3208 | BPS-3206 |

| Minimum Pilot Pressure required for Actuation (PSI) | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 |
|---|------|----|----|----|-----|-----|-----|-----|-----|-----|
| If Inlet Pressure (PSI) is | 0-20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 |

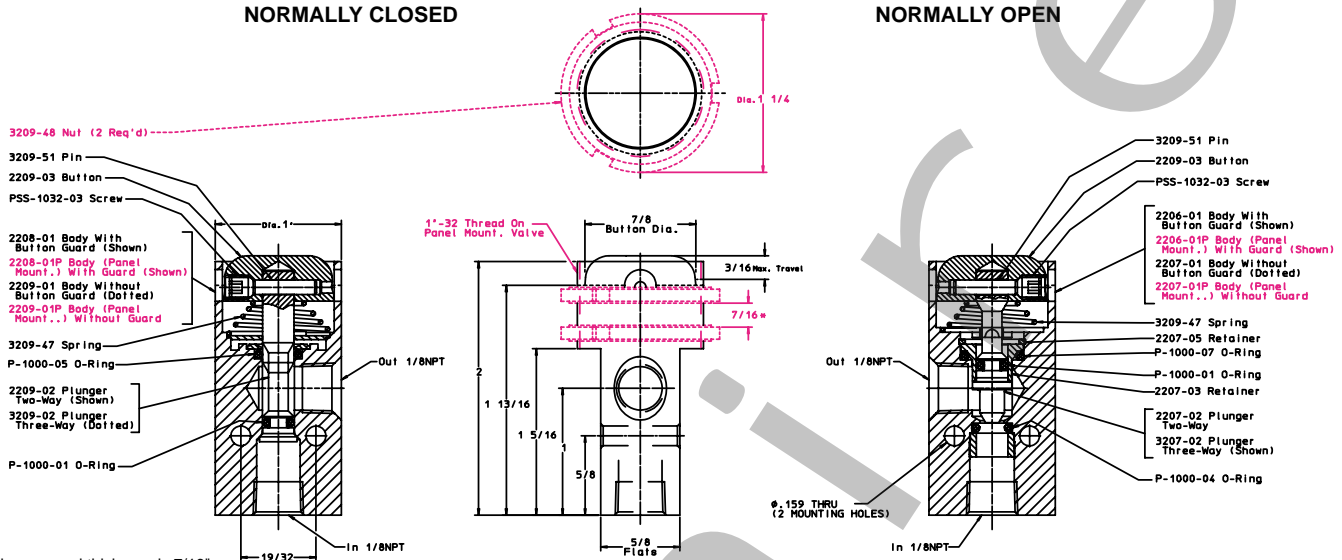
Suffix Options:

- 67 Brass and stainless steel internals
- 68 Mtg. holes clear #10 screw
- 155 Fluorocarbon seals
- 167 Body, brass internals, pilot cap are electroless nickel plated.
- S Strong spring for applications with marginal lubrication. Increases pilot pressure by 45%.

BASIC VALVE DIMENSIONS AND PARTS

NORMALLY CLOSED

NORMALLY OPEN



*Maximum panel thickness is 7/16", except for valves without button guard. For these, maximum panel thickness is 1/4".

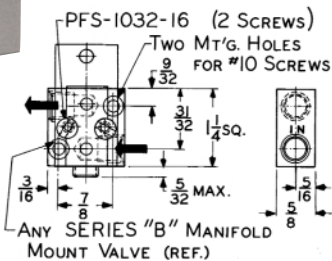
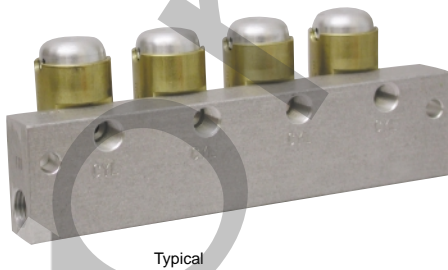
Repair Kits

| | Basic Valve Kit | | Fluorocarbon Valve Kit | |
|-----------|---------------------|----------|------------------------|--------------|
| | Manual & Mechanical | Pilot | Manual & Mechanical | Pilot |
| 2 way, NO | B-2207 | B-2207-P | B-2207-155 | B-2207-P-155 |
| 2 way, NC | B-2209 | B-2209-P | B-2209-155 | B-2209-P-155 |
| 3 way, NO | B-3207 | B-3207-P | B-3207-155 | B-3207-P-155 |
| 3 way, NC | B-3209 | B-3209-P | B-3209-155 | B-3209-P-155 |

MANIFOLD MOUNTING TYPE

Any of the standard Series "B" Valves can be supplied for manifold mounting. Gasketed ports are provided on one of the flats of the body. Valves can be grouped on a common multiple manifold, as shown below. A common inlet supplies all valves on the manifold. Custom designs are also available.

Consult factory for information about types of multiple manifolds available.



Typical Valve Mounting Station

