



## CHECK VALVE PN16



### PN16 Cast Iron Swing Check Valve, Lever & Weight Model: 4M-SWC

#### Features

- ◆ Pressure Ratings PN16
- ◆ Model: 4M-SWC are manufactured and tested per requirements AWWA C508 standard for **swing-check valves** for waterworks service
- ◆ Drilling flange: ANSI B16.1 Class 125 / ANSI B16.1 Class 250
- ◆ Corrosion Protection: Standard epoxy painting system with overall coating thickness 250µm according to AWWA C550
- ◆ All fasteners are Stainless Steel type 304

#### Optional Devices

Closure Control Devices code as follows:

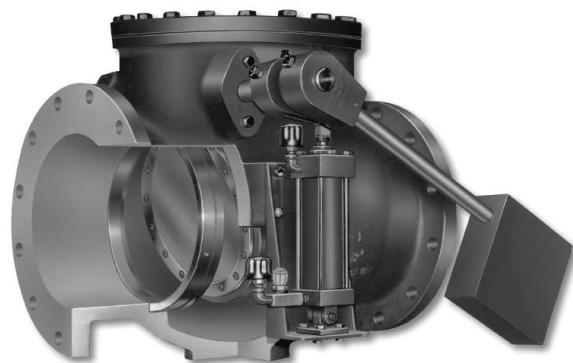
- ❖ AC Air Cushion Side Mounted Cylinder (Lever & Weight)
- ❖ OC Oil Controlled Side Mounted Cylinder

#### Closure Control Devices

##### Air Cushion Side Mounted Cylinder (AC)

The Cast Iron Swing check valve Lever & Weight Model: 4M-SWC with Air Cushion Side Mounted Cylinder (AC) Device is designed to handle higher flow rates, pressures and withstand shock.

**Application** For Free Open, Fast Close applications, the air cushioned check valve utilizes a totally enclosed cushion cylinder externally mounted to the side of the main valve body. A heavy outside lever, positively clamped to an extra-large diameter pivot shaft, forces the disc to close immediately upon pump shut down and before reverse flow takes place. The weighted lever drives the piston into the cushion chamber, compressing the 30 trapped air and creating a cushion during valve closure.

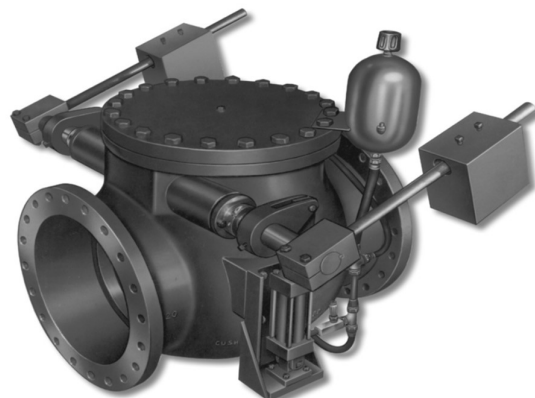


#### Closure Control Devices

##### Oil Controlled, side mounted Cylinder (OC)

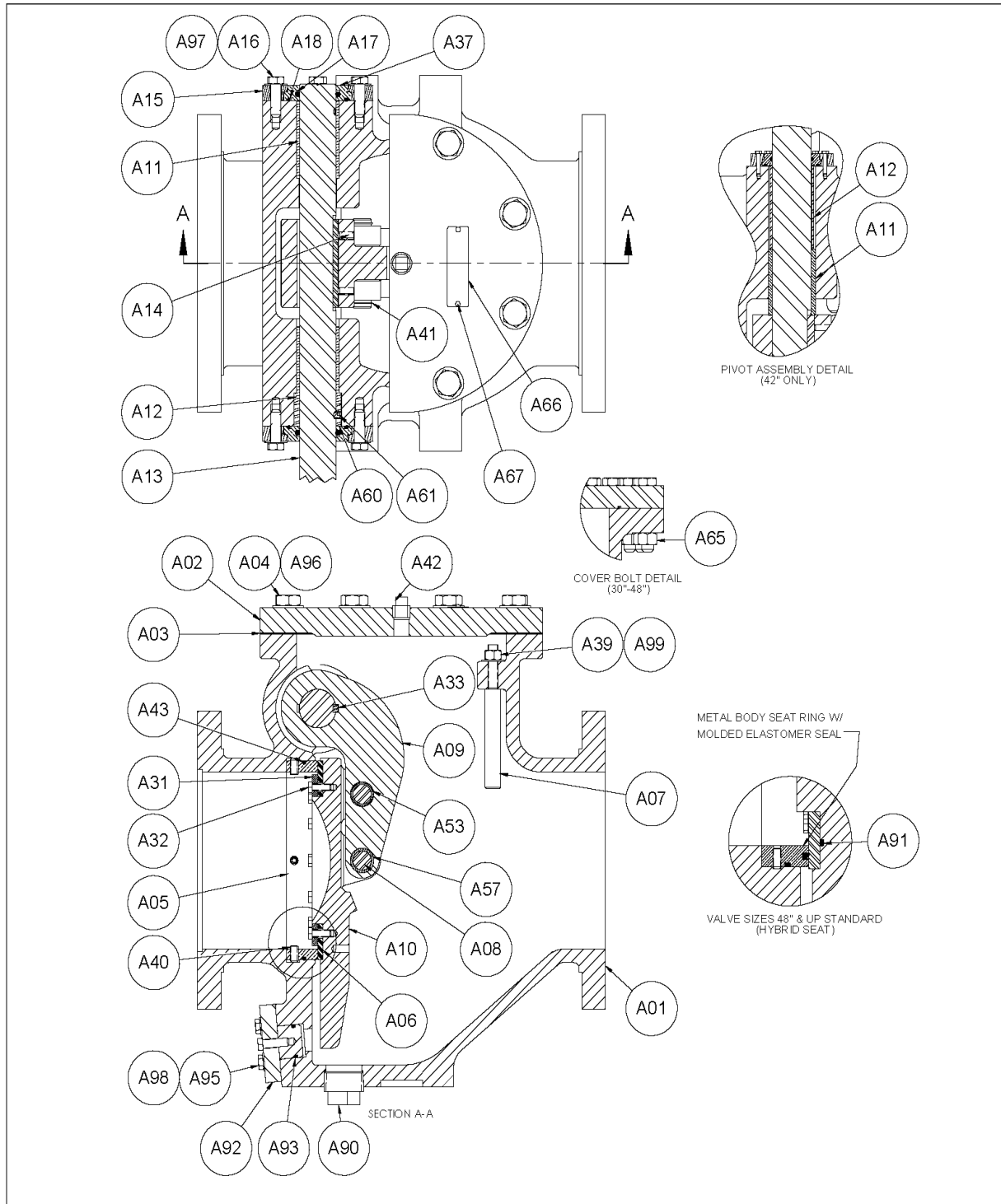
The Cast Iron Swing check valve Lever & Weight Model: 4M-SWC with Oil Controlled, side mounted Cylinder (OC) Device is designed to handle higher flow rates, pressures and withstand shock.

**Application** For Free Open, Slow Close applications, The Cast Iron Swing check valve Lever & Weight Model: 4M-SWC are available with an Oil Controlled, Side Mounted Cylinder closure control device. The totally enclosed oil cylinder is protected from the elements. Three-stage closure on valves minimizes damaging water hammer.





## Valve Assembly Drawings layout



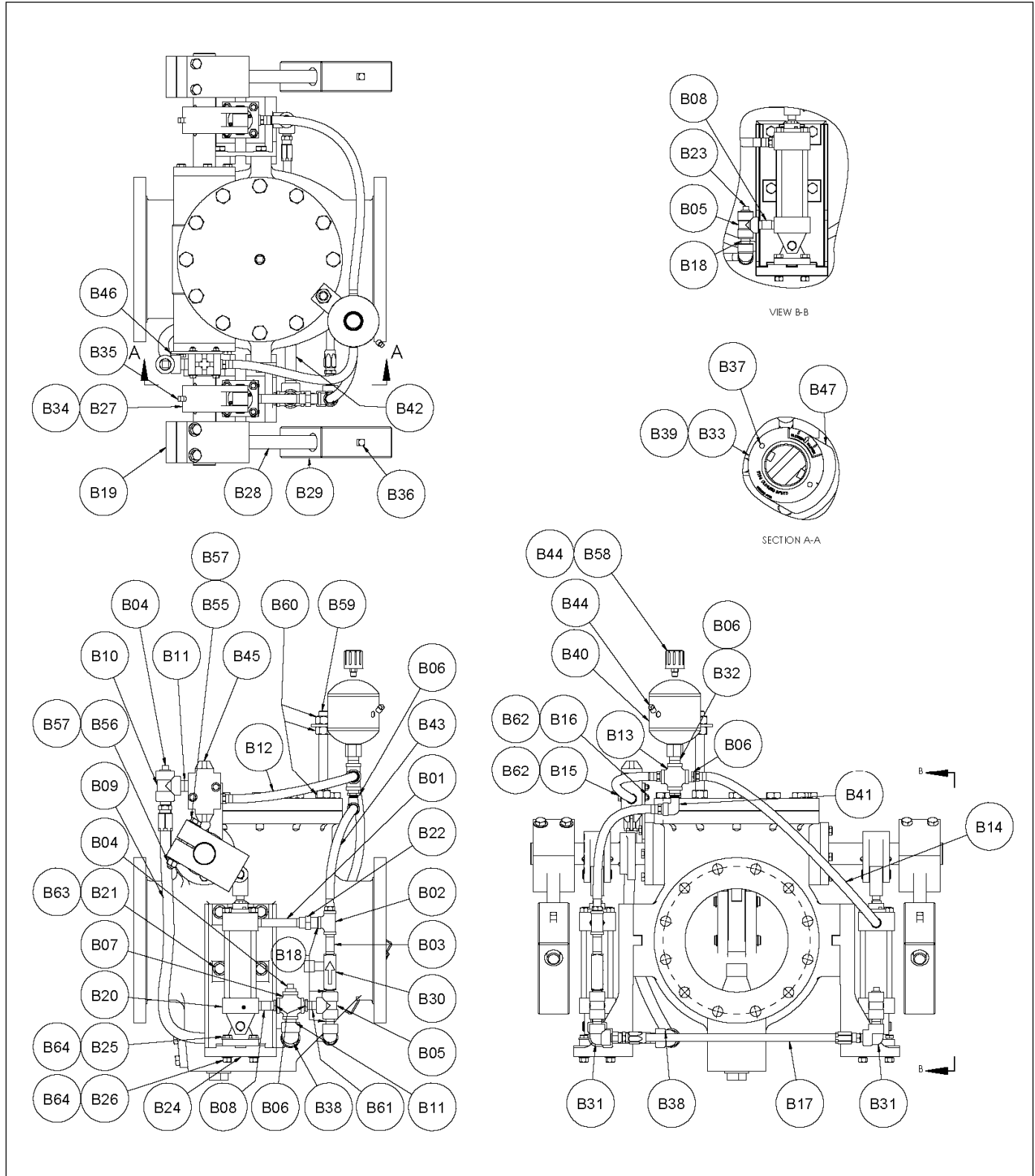


## Valve assembly Parts Identification

A01	BODY
A02	COVER
A03	COVER SEAL
A04	COVER BOLTS
A05	BODY SEAT RING
A06	DISC SEAT
A07	DISC STOP
A08	DISC PIN
A09	DISC ARM
A10	DISC
A11	PIVOT SHAFT STRAIGHT BUSHING
A12	PIVOT SHAFT FLANGED BUSHING (ALL EXCEPT 42")
A12	SPACER (42" ONLY)
A13	PIVOT SHAFT
A14	DISC ARM SET SCREW
A15	PIVOT SHAFT COVER
A16	PIVOT SHAFT COVER BOLT
A17	PIVOT SHAFT SEAL
A18	PIVOT SHAFT COVER SEAL
A31	SEAT RETAINING RING
A32	SEAT RETAINING SCREW
A33	PIVOT SHAFT KEY
A37	PIVOT SHAFT SEAL RETAINER
A39	DISC STOP LOCKNUT
A40	BODY SEAT RETAINING SET SCREW
A41	DISC PIN RETAINER
A42	COVER PIPE PLUG
A43	BODY SEAT SEAL
A53	PIVOT SLEEVE BEARING
A57	DISC ARM SLEEVE
A60	PIVOT SHAFT COLLAR
A61	PIVOT SHAFT SET SCREW
A65	COVER NUT
A66	DATA PLATE
A67	DRIVE SCREW
A90	BODY PIPE PLUG
A91	DISC RING SEAL
A92	PLUG
A93	PLUG SEAL
A95	PLUG RETAINING SCREW
A96	COVER BOLT WASHER
A97	PIVOT SHAFT COVER WASHER
A98	COVER WASHER
A99	DISC STOP WASHER



## Valve assembly with Oil Controlled, Side Mounted Cylinder (OC)







## Valve assembly with Oil Controlled, Side Mounted Cylinder (OC) Parts Identification

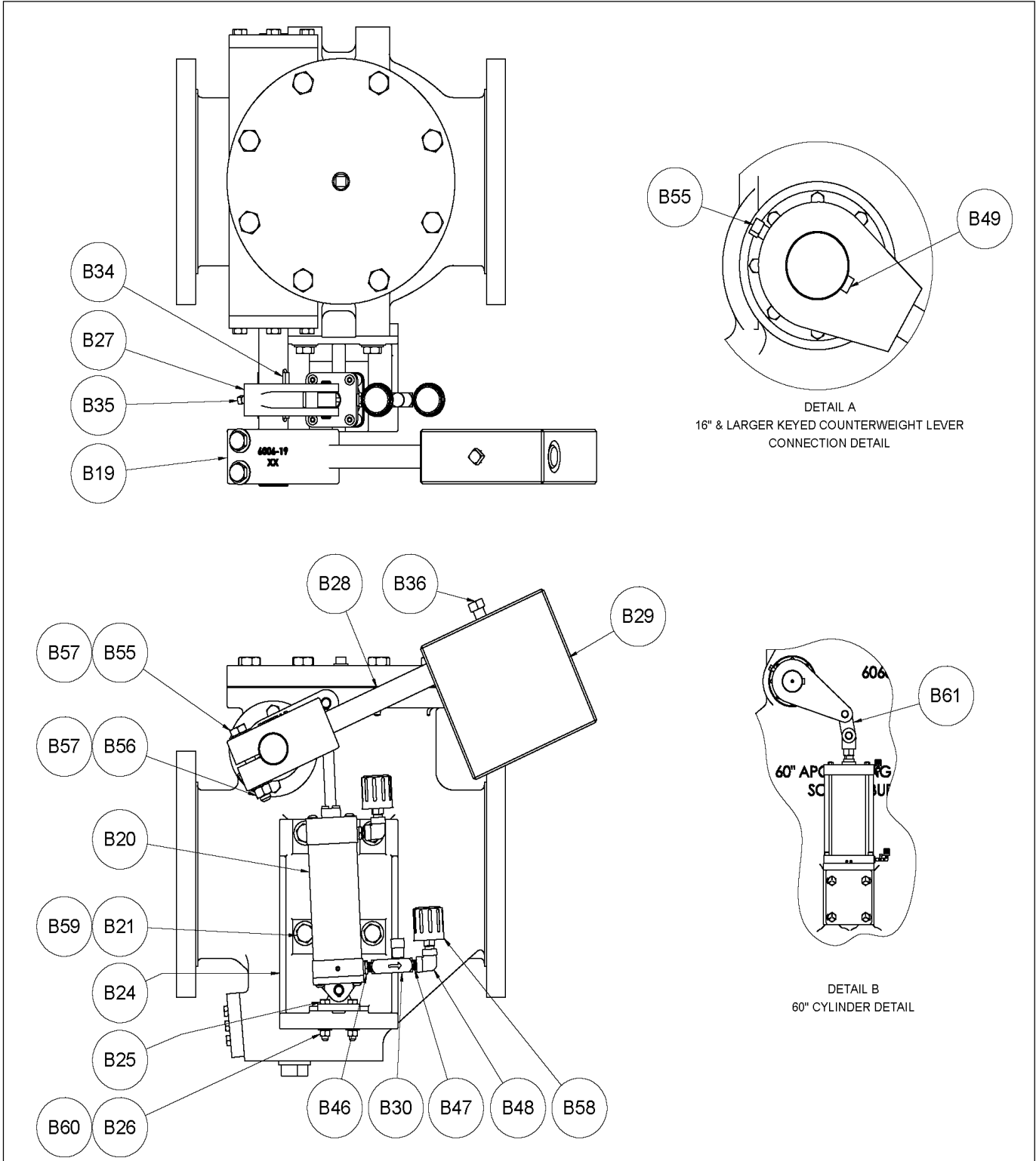
B01	NIPPLE
B02	TEE
B03	NIPPLE
B04	PIPE PLUG
B05	TEE
B06	REDUCING BUSHING (SEE NOTE 3)
B07	CROSS
B08	NIPPLE
B09	HOSE
B10	TEE
B11	NIPPLE
B12	HOSE
B13	CROSS
B14	HOSE
B15	TIMING VALVE SCREW
B16	TIMING VALVE NUT
B17	HOSE
B18	NIPPLE
B19	COUNTERWEIGHT LEVER ARM
B20	PNEUMATIC CYLINDER
B21	CYLINDER BRACKET MOUNTING BOLT
B22	UNION
B23	PIPE PLUG
B24	CYLINDER BRACKET
B25	CYLINDER BRACKET MOUNTING BOLT
B26	CYLINDER BRACKET MOUNTING NUT
B27	CYLINDER LEVER
B28	COUNTERWEIGHT ARM
B29	COUNTERWEIGHT
B30	FLOW CONTROL VALVE
B31	ELBOW
B32	NIPPLE
B33	TIMING VALVE CAM DIAL
B34	CUSHION LEVER KEY
B35	CUSHION LEVER SET SCREW
B36	COUNTERWEIGHT SET SCREW
B37	DRIVE SCREW
B38	ELBOW
B39	CAM SET SCREW
B40	OIL RESERVOIR TANK
B41	ELBOW
B42	NIPPLE
B43	HOSE
B44	PIPE PLUG (SEE NOTE 2)
B45	TIMING VALVE
B46	TIMING VALVE MOUNTING BRACKET
B47	CAM
B49	LEVER ARM KEY (NOT SHOWN)
B55	LEVER ARM BOLT/SET SCREW
B56	LEVER ARM NUT
B57	WASHER
B58	AIR BREATHER
B59	THREADED ROD (SEE NOTE 1)
B60	HEX NUT (SEE NOTE 1)
B61	NIPPLE
B62	WASHER
B63	WASHER
B64	WASHER

### NOTES

1. B59 & B60 ARE REPLACED WITH A SINGLE BRACKET (NOT SHOWN) WHEN VALVE IS USED IN VERTICAL ORIENTATION
2. VALVE IS SHIPPED WITH PIPE PLUG IN PLACE OF BREATHER ON RESERVOIR, BREATHERSHIPED LOOSE
3. ADDITIONAL REDUCER ON 14-20" IS USED TO CONNECT OIL RESERVOIR TO 1" NPT CROSS



## Valve assembly with Air Cushion Side Mounted Cylinder (AC)





## Valve assembly with Air Cushion Side Mounted Cylinder (AC) Parts Identification

B19	COUNTERWEIGHT LEVER ARM
B20	PNEUMATIC CYLINDER
B21	CYLINDER BRACKET MOUNTING BOLT
B24	CYLINDER BRACKET
B25	EYE BRACKET MOUNTING BOLT
B26	EYE BRACKET MOUNTING NUT
B27	CUSHION LEVER
B28	COUNTERWEIGHT ARM
B29	COUNTERWEIGHT
B30	FLOW CONTROL VALVE
B34	CUSHION LEVER KEY
B35	CUSHION LEVER SET SCREW
B36	COUNTERWEIGHT SET SCREW
B46	REDUCING BUSHING
B47	PIPE NIPPLE
B48	PIPE ELBOW
B49	LEVER ARM KEY
B55	LEVER ARM SET SCREW(16-66")/BOLT(2-3", 14")
B56	LEVER ARM NUT
B57	COUNTERWEIGHT LEVER ARM WASHER
B58	AIR BREATHER
B59	CYLINDER BRACKET WASHER
B60	EYE BRACKET WASHER
B61	LINK