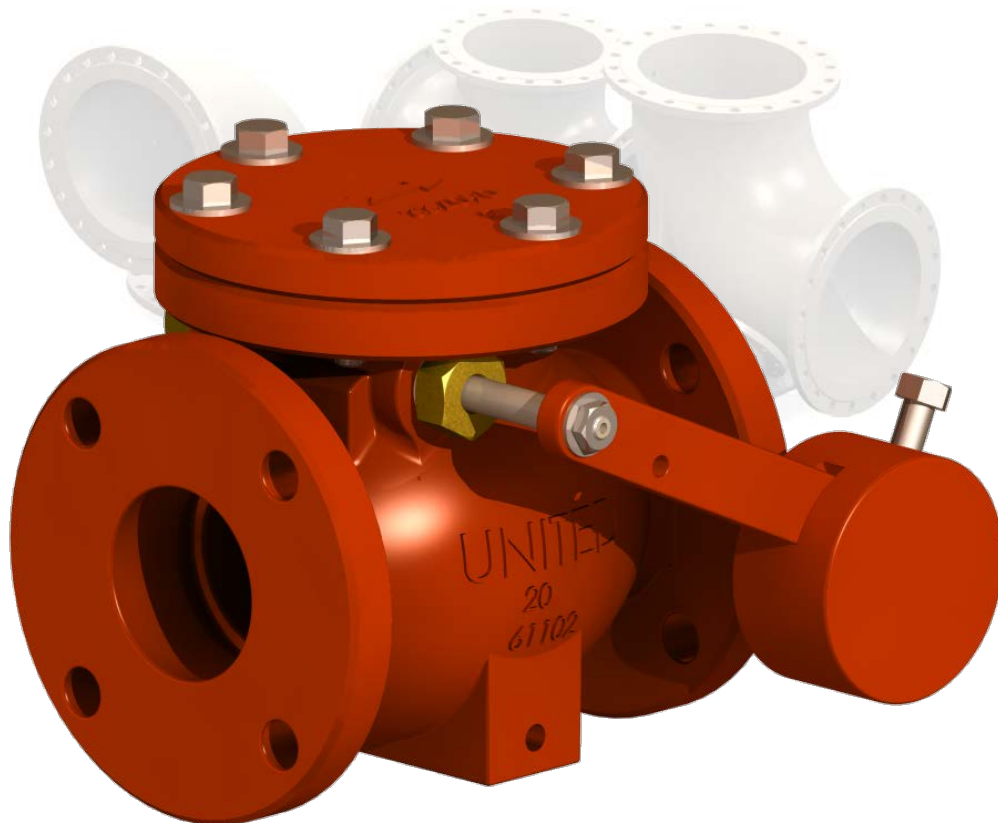




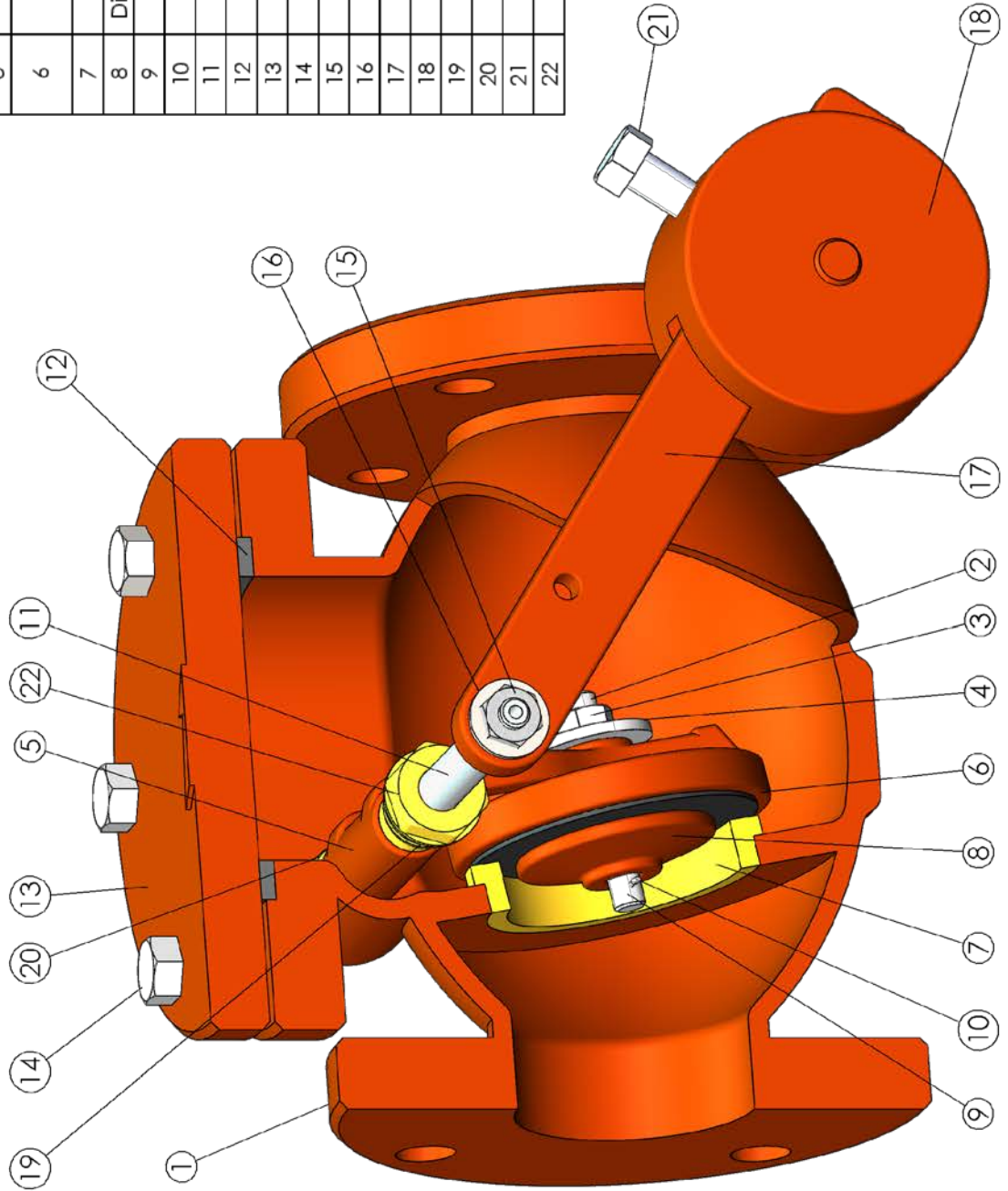
Maintenance and Operation Manual

Swing Check Valve Configuration
AWWA C508



Series 7700 (standard)
Series 7700-LW (with lever & weight)
Series 7700-LS (with lever & spring)

Item No.	Description	Material
1	Body	ASTM A126, Class B
2	Stud	AISI 304
3	Nut	AISI 304
4	Washer	AISI 304
5	Hanger	ASTM A126, Class B
6	Disc	ASTM A126, Class B
7	Seal Ring	NBR
8	Seat Retainer Ring	ASTM B62 C83600
9	Clevis Pin	ASTM A126, Class B
10	Cotter Pin	AISI 304
11	Hanger Shaft	AISI 304
12	Gasket	NBR
13	Cover	ASTM A126, Class B
14	Bolt	AISI 304
15	Shaft Nut	AISI 304
16	Shaft Washer	AISI 304
17	Lever	AISI 1020
18	Weight	ASTM A126, Class B
19	Washer	PTFE
20	Hanger Bolt	ASTM B62
21	Set Screw	Carbon Steel
22	Packing Nut	Brass



OPERATION AND MAINTENANCE MANUAL
AWWA C508 SWING CHECK VALVES w/ LEVER & WEIGHT

PROJECT TITLE:

TITLE OF EQUIPMENT: SERIES 7700 / 7700-LW / 7700-LS
AWWA C508 SWING CHECK VALVES FOR WATERWORKS SERVICE

EQUIPMENT MODEL NUMBER:

PROJECT NUMBER:

TAG NUMBER / COMPONENT ID:

CONTRACTOR:

ADDRESS:

PHONE:

FAX:

PURCHASE ORDER NUMBER:

MANUFACTURER'S ORDER NUMBER:

MANUFACTURER:

UNITED WATER PRODUCTS
5355 RAMONA BLVD.
JACKSONVILLE, FLORIDA 32205
1-877-766-4459
FAX 1-877-766-4458

DISTRIBUTOR/REP:

ADDRESS:

CONTACT:

PHONE:

FAX:

INSTALLATION, OPERATION AND INSPECTION

Series 7700-LW AWWA C508 Swing Check Valve for Waterworks Service

GENERAL

All valves should be inspected at time of delivery for shipping damage and to confirm compliance with specifications. Whenever possible the valves and all apparatus should be protected from the weather. Water and debris should not collect in the valve.

Note: These instructions are guidelines for use by experienced piping and mechanical personnel.

TOOLS AND EQUIPMENT

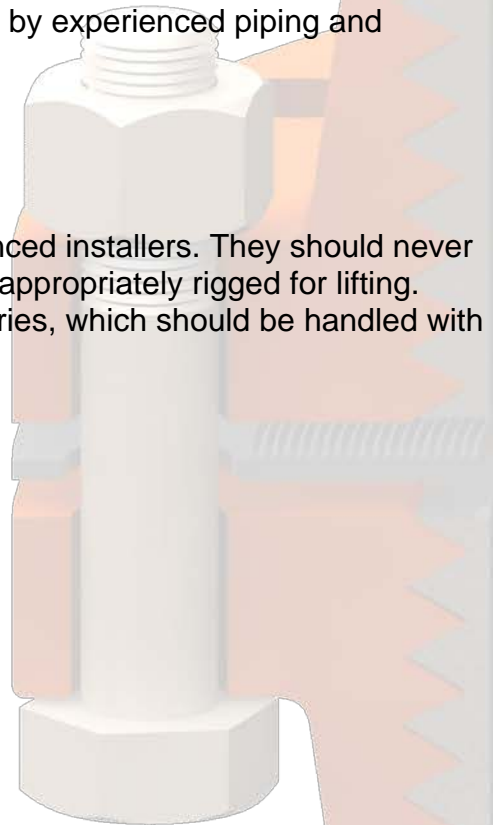
Warning: Valves are to be handled by experienced installers. They should never be used as structural members and should be appropriately rigged for lifting. Valves are heavy and include various accessories, which should be handled with caution.

- Standard box wrenches
- Packing puller
- Pin drivers
- Packing cutter
- Ball peen hammer
- Chain hoist
- Rigging equipment

LAYOUT AND SITING

UNITED 7700 Swing Check Valves may be installed in horizontal pipe-work and vertical pipe-work if the flow is in an upwards direction. Valves must be provided with adequate support. Adjoining pipe-work must be supported to avoid the imposition of pipeline strains on the valve body. Heavy valves may need independent support or anchorage.

Note: Check valves must not be installed in vertical pipe-work with the flow in the downwards direction.



INSTALLATION

A. Check that valve end joints conform to the mating pipe and verify that ends are clean and sound. All 7700 series valves are supplied with flat face flanges with ANSI class 125 drilling. Do not mate these valves to pipe or fittings with raised face flanges.

B. Remove any material used to restrain the lever or pin during shipment and storage. Attach any outside closing mechanism in proper position manually.

C. Closing mechanism should be checked to insure freedom of motion and proper operation. Cover bolts shall be checked for any loose joints.

D. When handling the valve, do not use the outside mechanisms for lifting.

E. It is necessary to install the valve in proper orientation with regard to flow direction. Please note flow arrow on side of body.

F. Prepare pipe ends per pipe manufacturer's instructions, and install valve as per appropriate instructions for the specific joint. All piping should be properly supported to avoid line stress on the valve. Do not use valves as a jack to force a pipeline in position.

G. Standard wrenches and or sockets are to be used to tighten all nuts and bolts. Fasteners are to be tightened in a crisscrossed pattern to insure balance loading of bolts.

OPERATION

Once in the pipeline, the swing check valve will operate as flow conditions dictate. The valve will open as the pressure on the upstream side of the disc overcomes the downstream side. The valve will close as the situation reverses itself or the pressure equalizes.

These valves are self contained units. Outside levers, weights, springs or hinge pins should never be used to manually operate the valve or restrict its operation.

External shields and surrounding piping should not interfere with the free operation of external apparatus of the valves.

MAINTENANCE

The system is designed to be trouble free with minimum care. Frequency of inspection should be based on the operational characteristics of the system, i.e.

systems of high cycles should be inspected frequently. At a minimum, semi-annual inspections are recommended. Points of inspection should be at a minimum:

1. All end joints, cover joints and packing boxes should be inspected for leakage.
2. Bolts should be checked for tightness, a torque of 90 foot pounds is recommended for gasketed joints.
3. Inspection of the valve during operations is recommended so that the outside linkages can be inspected for proper operation.
4. Inspection of the packing box is required to assure no leakage is evident. If leakage exists replace o-rings. Do not tighten Packing Nut (#22) to stop the leak. **Caution:** O-rings should not be changed or added in an active valve. Valve should be isolated to prevent injury or damage to valve and operator.
5. Inspection of interior of valve is not necessary unless improper operation is witnessed or leakage beyond the allowable rate is experienced. The interior of the valve and the internal components can be inspected by removing the valve cover. Cover gasket should be replaced any time this joint is broken. Never re-install a used cover gasket.

RECOMMENDED SPARE PARTS QTY PER VALVE

Disc seat ring, Buna-N (NBR), 1
Cover gasket, Buna-N, 1
O-rings, Buna-N, 2
O-rings, Buna-N, 1

LUBRICATION

Under normal operation, lubrication is not required to maintain proper operation of components or assembled units. User should review Typical Maintenance Summary Form (below) for additional information and instructions.

TROUBLESHOOTING

Possible symptoms/ Cause/ Corrective action

End joint leakage: Tension on flange bolts is relaxed. Tighten flange bolts/nuts in a crisscrossed pattern.

Cover gasket leakage: Tension on cover bolts is relaxed. Tighten cover bolts in a crisscrossed pattern. Should leakage continue, replace cover gasket.

Valve slams while tension on spring is loose: Adjust spring tension.

Seat leakage: Seats are dirty. Remove inspection cover and flush disc. If seat is damaged, replace Buna-N (NBR) insert.

Leak by Hinge Pin: Cracked or broken o-rings. Replace o-rings.

LIMITED WARRANTY

UNITED WATER PRODUCTS WARRANTS TO THE ORIGINAL PURCHASER THAT ITS PRODUCTS ARE FREE FROM MANUFACTURING DEFECTS AND ARE MANUFACTURED ACCORDING TO ITS PUBLISHED LITERATURE AND SPECIFICATIONS. UNITED WATER PRODUCTS' SOLE OBLIGATION UNDER THIS WARRANTY SHALL BE LIMITED TO, AT UNITED WATER PRODUCTS' OPTION, THE REPAIR OR EXCHANGE OF ANY PART OR PARTS FOUND TO BE DEFECTIVE.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARISING BY LAW OR OTHERWISE INCLUDING (WITHOUT OBLIGATIONS OF UNITED WATER PRODUCTS), WITH RESPECT TO FITNESS, MERCHANTABILITY, AND CONSEQUENTIAL DAMAGES. UNITED WATER PRODUCTS NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT AND ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCT.

THE WARRANTY SHALL NOT APPLY TO THIS PRODUCT, OR ANY PART THEREOF; WHICH HAS BEEN SUBJECT TO ACCIDENT, NEGLIGENCE, ALTERATION, ABUSE, OR MISUSE. UNITED WATER PRODUCTS MAKES NO WARRANTY WHATSOEVER IN RESPECT TO ACCESSORIES OR PARTS NOT SUPPLIED BY IT. THIS WARRANTY SHALL NOT BE EXTENDED, ALTERED, OR VARIED EXCEPT BY A WRITTEN INSTRUMENT SIGNED BY AUTHORIZED PERSONNEL OF UNITED WATER PRODUCTS. THE TERM "ORIGINAL PURCHASER" AS USED IN THIS WARRANTY SHALL BE DEEMED TO MEAN THAT PERSON OR ENTITY TO WHOM THIS PRODUCT WAS ORIGINALLY SOLD.

TO OBTAIN WARRANTY SERVICE OR ADDITIONAL INFORMATION, CALL OR WRITE US AND PROVIDE PERTINENT INFORMATION REGARDING YOUR CLAIM OR PROBLEM, INCLUDING THE MODEL NUMBER AND DESCRIPTION OF THE PRODUCT, A DETAILED ACCOUNT OF THE PROBLEM(S) ENCOUNTERED, AND A DATED PROOF OF PURCHASE. THIS WARRANTY COVERS THE PRODUCT FOR A PERIOD OF ONE YEAR FROM DATE OF SHIPMENT.

For warranty service, please contact:

United Water Products
5355 Ramona Blvd. Jacksonville,
Florida 32205 Phone:
1-877-766-4459
Fax: 1-877-766-4458

Not covered by extended warranty:

- Damage to external coating
- Damage due to poor handling and installation
- Damage due to lack of proper maintenance
- Loss of use of components due to poor maintenance

TYPICAL MAINTENANCE SUMMARY FORM

1. Equipment item
2. City equipment identification number
3. Manufacturer name and address
4. Equipment series number / product code
5. Weight of individual components
6. Nameplate date
7. Manufacturer's local representative

STANDARD RECOMMENDED MAINTENANCE

Lubricant: Mobilith AW 0

Maintenance frequency: Quarterly