



## AKRON SWING-OUT™ VALVE INSTALLATION AND OPERATING INSTRUCTIONS

### INSTALLATION INSTRUCTIONS

#### A. GENERAL GUIDELINES

The Swing-Out valve can be installed in either direction. All Swing-Out valves have two Seats and will hold pressure or vacuum in either direction.

1 1/2" through 4" Swing-Out Valves are designed to withstand hydrostatic pressures up to 500 psi. The 1" Valve is designed to withstand hydrostatic pressures up to 1000 psi.

Each Valve is factory tested in both directions. Therefore, if possible, do not disassemble the valve before installation. If it is necessary to disassemble the valve, verify the Valve is in either the open or closed position before removing the Flange Bolts. When reassembling the Valve, the Ball must be in the closed position before tightening the Flange Bolts. If the Valve position is not known, the groove in the top of the Handle Trunnion should be noted. The groove indicates the direction of the waterway.

3" valves are now protected with plastic end caps when they leave the plant. These are intended to prevent debris from entering the valve during transport, storage and installation. They should not be removed until necessary. Even after one cap has been removed to install the valve onto a pump module, the other cap should remain until downstream fittings are to be installed.

Drilling an extra hole in the R-1 Handle will not adversely affect the strength of the Handle. However, placing the actuator too close to the center of the Valve can adversely affect the Valve's operation. When using Remote Control Rods, Akron Brass recommends the distance between the centerline of the Valve Trunnion and the centerline of the Handle hole be at least 5" for 2 1/2" - 3 1/2" Valves.

**⚠ CAUTION:** The Valve is configured for optimum performance. Do not alter in any manner.

**⚠ CAUTION:** When installing threaded Adapters, always use a wrench on the Adapter adjacent to the pipe being connected. DO NOT TIGHTEN THE PIPE WITH A WRENCH ON THE VALVE BODY, OPPOSITE ADAPTER OR PIPE AT THE OTHER END OF THE VALVE. The Flange Bolts are not designed to withstand the stress of tightening pipes.

**⚠ CAUTION:** Foreign material, such as metal chips from welding, left in the plumbing can jeopardize the sealing capability of the valve. To avoid valve failure, the pump and entire system should be flushed before the valves are installed.

If a valve fails testing and can be flushed with water prior to removal, it should be cycled a few times and re-tested. Flushing the valve can remove debris that may be preventing the ball and seat from sealing properly. If it is suspected that the seats are damaged or otherwise faulty they should be replaced. Upon removal of the faulty seats care should be taken to prevent causing further damage to the seats so that they can be analyzed upon return to Akron Brass.

DO NOT DRILL OR TAP HOLES IN THE PIPING ONCE THE VALVE HAS BEEN INSTALLED.

Be sure the water used to flush the system does not have debris that may cause damage to the Ball or Seats.

**B. CHANGING THE HANDLE POSITION**

The handle position on Swing-Out Valves with manual Handles (R-1, TS, TSC or SZ) can be easily adjusted to any one of 8 different positions by removing and repositioning the Handle. Repositioning the Stop Plate can make additional adjustments to the Handle position.

**C. SZ HANDLE ADJUSTMENT**

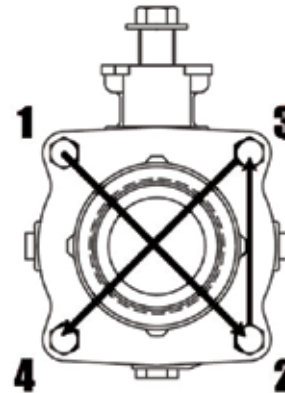
The Bolt on top of the Valve that secures the SZ handle must not be over tightened. To adjust, turn the Handle to the fully unlocked position. Then tighten until a slight drag is felt while opening and closing the Valve. The Valve should lock within 2 turns of the Handle Knob. Additional adjustments may be necessary to compensate for future wear. Always be sure the handle is tightened whenever the Valve is left partly open.

**Adapter Torque Requirements**

Following are torque requirements for attaching Adapters to 1" - 4" Valves:

Valve Size	Torque
1"	100-120 inch pounds
1 1/2"	216-240 inch pounds
2" & 2 1/2"	25-30 foot pounds
3" & 3 1/2"	38-40 foot pounds
4"	60-70 foot pounds

Bolts should be tightened evenly in a diagonal sequence



**OPERATING INSTRUCTIONS**

1 1/2" through 4" Swing-Out Valves are designed to operate at pressures up to 250 psi. The 1" Valve is designed for pressures up to 500 psi. The 8840 will only support 250 psi in the direction of the arrow on the Valve body.

**CAUTION:** Always open and close valves slowly to avoid water hammer. NFPA 1901 Standards specify a minimum of 3 seconds is required to open or close any 3" or larger discharge valve. Akron's Slo-Cloz™ device, as well as Electric and Manual Actuators, when installed on Akron Swing-Out Valves will help meet this requirement.

**MAINTENANCE INSTRUCTIONS**

**CAUTION:** Do not lubricate the Ball or Seats. Lubricants can collect dirt and grit, which can cause excessive wear. Water is a natural lubricant. Periodic actuation of the valve will help prevent sticking. Periodic Flushing is recommended to remove dirt and debris which may cause excessive Valve wear and premature failure.

**Field Service Kits**

If it becomes necessary to repair a Swing-Out Valve, Akron offers the following Kits:

Valve with composite ball	Ball Kit*	Valve with Metal Ball	Kit without Ball**	Kit with Ball
1"	8903	1"	9208	8803
1 1/2"	8904	1 1/2"	9209	8804
2"	8905	2"	9204	9145
2 1/2"	8906	2 1/2"	9205	9146
3" & 3 1/2"	8907	3" & 3 1/2"	9206	9147
4" (8940)	8908	4"(8840)	9166	

\*These Kits include a new composite ball.  
The 8803-9147 Kits can also be used to change to a Metal Ball.

\*\*Often, the valve can be rebuilt by replacing the Seats only. Thus saving time and cost.



PHONE: 330.264.5678 or 800.228.1161 | FAX: 330.264.2944 or 800.531.7335 | akronbrass.com

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