

S/N: _____	MODEL #: _____	DATE OF PURCHASE _____
MATERIALS OF CONSTRUCTION: BODY _____		BLADDER _____
PUMP AREA & NUMBER _____		
SUPPLIER: COMPANY _____	CONTACT _____	
PHONE _____	FAX _____	E-MAIL _____

INSTALLATION NOTES *READ BEFORE INSTALLATION*

- Blacoh recommends installing a pressure relief valve in all pump systems to ensure compliance with pressure limits on system equipment.
- Mount SENTRY as close to pump discharge as possible.
- **If a system pressure test is to be performed, SENTRY must be equipped with a constant source of compressed air prior to test.** This will avoid possible bladder damage.
- Temperature and pressure affect the strength and chemical resistance of plastic and rubber. Please consult factory for additional information.
- Remove all pressure from SENTRY unit AND pumping system before attempting maintenance.
- Do not exceed 150 PSI with Automatic models. **Check pressure rating shown on serial tag.**
- Always wear safety glasses when installing, charging or repairing SENTRY units.
- Do not operate a SENTRY that is leaking, damaged, corroded or unable to hold internal fluid, air or gas pressure.
- Pre-charge SENTRY with compressed air or nitrogen only. **DO NOT USE OXYGEN**

INSTALLATION FOR PUMP DISCHARGE PULSATION *READ BEFORE INSTALLATION*

Step 1 – Installation Position:

Install the dampener in-line, as close to the pump discharge as possible to absorb the pulse at its source. Install ahead of any downstream equipment such as risers, valves, elbows, meters, or filters. Dampener installation should be no more than ten pipe diameters from pump discharge. If using a flexible connector from pump to system piping, dampener should be installed at the pump discharge manifold. The flexible connector should be attached to the dampener's tee and system piping (see Figure 1). Since pressure is equal in all directions, SENTRY can be installed in a vertical, horizontal, or upside-down position. Blacoh recommends a vertical installation for better draining of the unit. Limitations for horizontal and upside-down mounting include high specific gravity, high viscosity, settling of solid material, or possible air entrapment, which could result in shortened bladder life and/or reduced dampening performance.

Step 2 – Air Line Connection

A. Units with rubber bladders:

Using a ¼" flexible air hose, run an airline to the top of SENTRY and connect it to the brass one-way check valve on top of the unit. Do not remove one-way check valve. The check valve prevents fluid back flow through the air hose in case of bladder failure. The air supply pressure to SENTRY must be greater than the pump discharge and/or system pressure. If the SENTRY is being used in conjunction with a pneumatically operated pump, a tee can be used to run the airline to SENTRY from the existing pump air supply line (See Figure 1). The tee should be placed **before** any in-line pump instrumentation such as a filter, regulator, lubricator or other pump control valve. **This is imperative for elastomeric bladder fitted Automatic models.**

B. Units with PTFE Bellows:

Using a ¼" flexible air hose, run an airline to the top of SENTRY and connect it to the Stainless Steel nipple on top of the pulsation dampener. The air supply pressure to SENTRY must be greater than the pump discharge and/or system pressure. If the SENTRY is being used in conjunction with a pneumatically operated pump, a tee can be used to run the airline to SENTRY from the existing pump air supply line (See Figure 2). The tee should be placed **after** any in-line pump instrumentation, such as a filter, regulator, lubricator or other pump control valve.



SENTRY INSTALLATION & OPERATION INSTRUCTIONS

AUTOMATIC MODEL

BLACOH FLUID CONTROL, INC.

Step 3 – Charging and Start Up:

Prior to starting the pump. Automatic models must have the air supply connected and compressed air available to SENTRY prior to pump start up to avoid possible bladder rupture. The Automatic SENTRY's pressure gauge will remain at zero pressure even after the air line is connected because the dampener will only allow air into the air chamber when it is required. Once the air supply line is attached to the air connection and air is available the pump can be started. No further adjustments are necessary.

NOTE: AUTOMATIC SENTRY MODELS ARE NOT RECOMMENDED FOR USE AS INLET STABILIZERS AT PUMP INLET OR AS A SURGE SUPPRESSOR AT A QUICK CLOSING VALVE. USE INLET STABILIZER MODELS ON THE INLET OF YOUR RECIPROCATING PUMP AND METAL SURGE SUPPRESSORS FOR WATER HAMMER OR QUICK CLOSING VALVE APPLICATIONS. CONSULT FACTORY FOR OPTIONS.

FIGURE 1

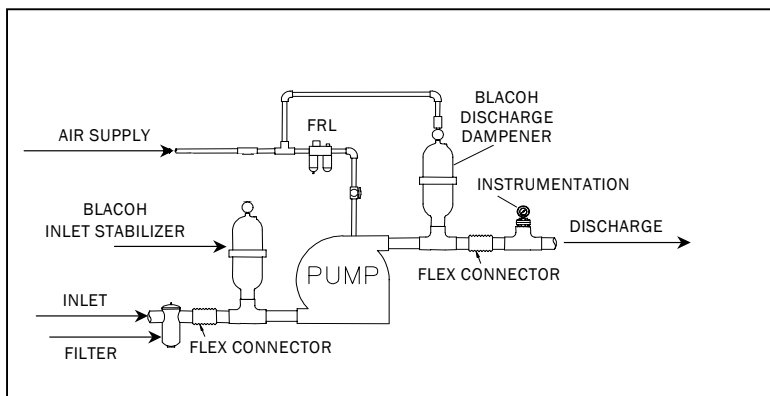
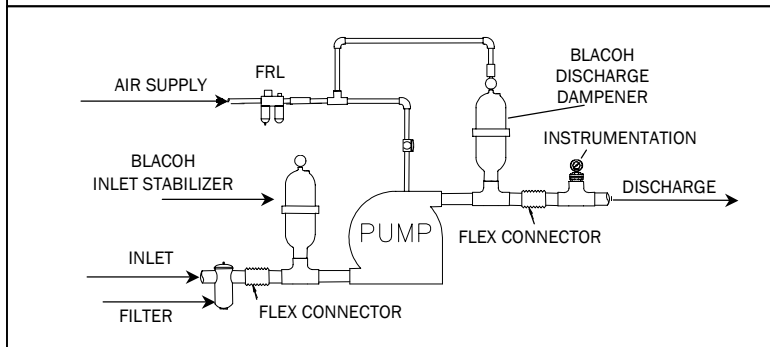


FIGURE 2



MAINTENANCE

SENTRY Pulsation Dampeners require very little maintenance. There is only ONE wear part – the elastomeric bladder or the PTFE bellow. There is no need for lubrication. Elastomeric bladder replacement should be put on a preventive maintenance program. Dampeners used in conjunction with diaphragm pumps should have the bladders replaced, at least, every second time the diaphragms in the pump are replaced. As with any pumping system, wear is dependent upon many factors, including material, temperature, chemicals, fluid abrasiveness, system design and so on. This suggested maintenance program might need to be adjusted according to specific applications. Periodic inspection of the dampener and fasteners should be conducted to visually check for signs of over-pressurization, fatigue, stress, or corrosion. Body housings and fasteners must be replaced at first indication of deterioration.

Standard Product Warranty: Blacoh Fluid Control warrants its products to be free of defective material and workmanship under normal use and service for two years from date of shipment. The remedy for any product defect covered under this warranty shall be limited to the replacement or repair of the defective part or parts and Blacoh will not be responsible for damages or injury caused to other products, machinery, buildings, property or person. This warranty shall be null and void if the product has been altered, misapplied, misused, or neglected of maintenance. Damage or loss resulting from over-pressurization of a product, whether from gas or fluid does not constitute a defect covered under this warranty nor will Blacoh be responsible in any way for any such damage or loss. Because Blacoh cannot anticipate or control the many different conditions under which its products may be used, Blacoh does not guarantee the applicability or suitability of its products for any particular use or purpose. Each user of Blacoh products should conduct its own tests to determine the suitability of each product for its intended uses or purposes. Blacoh products are sold with this limited warranty and each buyer assumes all responsibility for loss or damage, including consequential damage, arising from the handling and use of Blacoh products whether used in accordance with Blacoh's directions or otherwise. Statements concerning the possible use of Blacoh products are not intended as recommendations for any specific use of such products. This Standard Product Warranty shall be governed by and construed in accordance with the laws of the State of California.



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