



## Bellows Pump Instructions

### Description

The Iwaki America Bellows Pump is a positive displacement metering pump driven by a gear-reduced, fan cooled motor. Motors are thermally protected and are available in 33 or 135 RPM. Standard bellows are available with diameters of 1" 1/2" or 2".

All non-elastomeric liquid end parts are polypropylene. The valve gaskets and o-rings are available in either EPDM or VITON.

Standard motor housings are ABS to provide protection from corrosive environments.

### Output Adjustment, Steel Cam Assembly

To adjust flow rate, loosen the two hex socket set screws on the outside rim of the adjustment Cam body with the hex key provided.

The adjustment cam can then be rotated to a percentage of the rated output. *(An easy and accurate adjustment technique is to insert a Phillips screwdriver into the connecting rod/cam screw and turn.)* Retighten set screws to secure and lock the cam. Exact rates depend upon particular application, and are best determined in an in-site testing and calibration manner. Reproducible results cannot be obtained below 10% of the maximum stroke length.

### Output Adjustment, Plastic Cam Assembly

To adjust flow rate, loosen the three Phillips head screws at the outside edge of the cam's front face.

The adjustment cam can then be rotated to a percentage of rated output. *(An easy and accurate adjustment technique is to insert a Phillips screwdriver into the connecting rod/cam screw and turn.)* Retighten Phillips screws to secure and lock the cam. Exact rates depend upon particular application, and are best determined in an on-site testing and calibration manner. Reproducible results cannot be obtained below 10% of maximum stroke length.

**DO NOT RESTRICT FLOW WITH CONTROL VALVES, AS THIS CAUSES PRESSURE BUILD UP WHICH CAN BE HAZARDOUS, AND SHORTEN PUMP LIFE SPAN**

### Installation

The ability of the Iwaki America Bellows Pump to self-prime under most conditions is reduced by increased suction lift, decreased stroke length or increased discharge head. To prime pumps with anti-siphon springs installed, remove spring from outlet valve until pump primes and then replace spring.

The Bellows Pump will pump directly into a pressurized line. Consult data sheet for pressure ratings. Flow rates are somewhat reduced when pumping into pressure. Avoid higher pressure conditions which can damage pump and reduce life.

Operation with liquids above 120°F. will affect maximum pressure capability and pump life. For operation above 140°F., consult factory.

Pump should be securely mounted to prevent movement or "walking". Base of pump must be mounted on a shelf or flat surface parallel to the floor. **Do not mount base to a vertical wall or surface.**

Only use tubing size specified in the data sheet. Flexible or semi-rigid tubing is preferred. Always check the chemical compatibility of all wetted materials to insure maximum performance, longevity and safety. For specific recommendations, consult factory.

The Bellows Pump is designed to pump a wide variety of liquids. For thicker liquids (greater viscosities), flow rate may be reduced somewhat. Performance may be improved by increasing suction tubing diameter and/or provided flooded suction.



## SIMPLEX

Standard Model (115 VAC)	No. of Bellows	Maximum Capacity ML/min (gph)	Maximum Pressure PSI	Strokes/Minute SPM	Self-Prime Lift (dry) Feet (m)	Tubing I.D. Inches (mm)	Maximum Current (Amps)
SP20-10	1	110 (1.7)	10	33	5 (1.5)	3/8 (9)	1.1
SP20-20	1	255 (4.0)	5	33	4 (1.2)	3/8 (9)	1.1
SP80-10	1	380 (6.0)	10	135	5 (1.5)	3/8 (9)	1.1
SP80-30	1	2100 (33.3)	5	135	5-1/4 (1.6)	1/2 (12)	1.1

## DUPLEX

DP20-10	2	110 (1.7) x 2	10	33	5 (1.5)	3/8 (9)	1.1
DP80-30	2	2100 (33.3) x 2	5	135	5-1/4 (1.6)	1/2 (12)	1.1

Standard DP series pumps are supplied with the same bellows size and valve configuration in each head assembly. Custom combinations and pumps with more than 2 bellows are available upon request. Please consult factory. Specifications are subject to change without notice.



