

## A CATALOGUE FOR DZ/DS/DZR BELLOW PUMP

-  Food & Beverage
-  Mining
-  Paints & Dyes
-  Petrochemical
-  Pharmaceutical
-  Pulp & Paper
-  Power & Energy
-  Water Treatment

**1 Full Year  
Factory  
Warranty**



SIKO PUMP, specialized chemical handing pump manufacturer ([www.sikopump.com](http://www.sikopump.com))  
metering pump, magnetic driving pump, diaphragm pump, bellows pump, rotary pump... ..

### DZ/DS/DZR Bellows Electronic metering pumps

operate on a positive displacement principle. Pumps are designed to displace both corrosive and non-corrosive fluids. Accurate to  $\pm 0.5\%$  from stroke to stroke, when pump is set 50% to 100% of full stroke. Discharge pressure is maintained over the entire flow range of the pump. Poppet valves are used to prevent backflow; and springs are available to provide a positive shutoff, preventing siphoning through the pump in applications where a positive suction head exists. Available with either EPDM or FKM elastomers, the self-priming and corrosion resistant features help provide the reliable, continuous duty throughout a variety of chemical dosing applications.

### Compact size

The DZ/DS/DZR Bellows Metering Pumps have a compact design saves space, allowing manufacturers to reduce the overall size, weight and cost of their finished products. Small dimensions also permit them to fit into extremely tight areas

### Quiet, Reliable Performance

A high-efficiency motor drives an adjustable cam which operated the bellows. This simple mechanism provides virtually silent, accurate operation with no maintenance required.

### Feather

**No leakage**, There is no mechanical sealing position, no leakage exists.

**Precision of outlet**,  $\pm 1.5\%$  high precision can be achieved at the condition of clean water.

**Self-suction**, Suction range is 1 meter at the condition of normal atmosphere, temperature and clean water.

**Allowed to dry rotation**, For working chamber bag consists of bellows, dry rotation is allowed.

**Long service life**, The chamber is made from polypropylene that is anti-winding and special prescription; it can withstand countless reciprocating motion.

**Anti-corrosion**, Pump body is made from polypropylene; valve adopts special EPDM, FPM, resisting various acid, alkali and etc. corrosive liquids.

**Liquid temperature**, The maximum medicinal liquid temperature is 60 degree, when it is over 50 degree, the highest pressure is the half of that at 20 degree, when it surpasses 40 degree, the corrosiveness of liquid may be increased (take note of it).



### Specification range

Max capacity: 30 ml/min to 2300 ml/min

Pressure: 0.08 to 0.01 Mpa

Speed: 10 to 108 rpm

Inlet/outlet size: 9 mm

Bellows diameter size: 20 mm and 40 mm

No. of the pump: single, double, three and four

## Bellows Metering Pump Operation

The Bellows Metering Pumps operate on a positive displacement principle. The rotation of the motor shaft is transmitted into an up and down motion through a lever pivot crank mechanism. This motion provides a continuous squeezing and relaxing force on a bellows module, forcing fluid in and out of the module. Discharge pressure is maintained over the entire flow range of the pump.

## Optimum Operating Conditions

Optimum operating conditions consists of a 6" minimum suction lift and a discharge head of not less than 6". Pumps must be mounted vertically with the valve body at the top to obtain maximum metering accuracy.

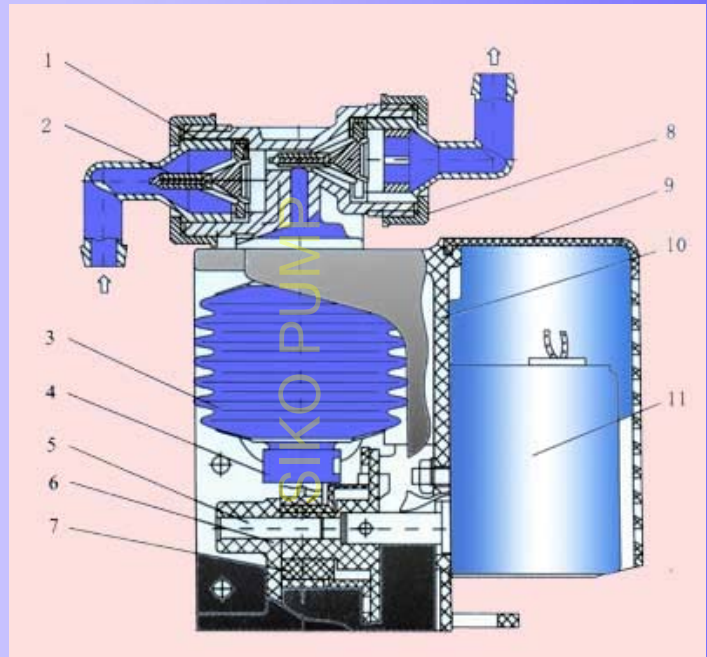
## Flow Rate and Discharge Pressure

The flow rate of each bellows module is regulated by three factors:

1. Diameter of the bellows,
2. Speed of the gear motor, and
3. Adjustment of the module stroke length.

Bellows are available in two different diameters.

The full stroke displacement and discharge pressure of the pump is dependent on the size of the bellows.



No.& Name	Material	Psc
1.Body	PP	2
2.Poppet valve	EPDM.FPM	2
3.Bellows	PP	1
4.Conn. rod	PP/POM	1
5.Spindle	SS304	1
6.Crank(B)	SS304/POM	1
7.Crank(A)	SS304/POM	1
8.Nut	PP	2
9.End house	ABS	1
10. Base	PP/PA66	1
11.Motor	/	1

SS304: 1Cr18Ni9Ti, PP: Polypropylene



### Note:

- ◆ Best priming and metering accuracy occurs when the stroke length is 50% or greater.
- ◆ Adjustment cannot be made while pump is operating. An adjusting screw changes the stroke length of an eccentric crank.
- ◆ Viscosity/Slurries — Maximum fluid viscosity is 5,000 centistokes. Poppet valves can handle fine slurries. Heavy slurries should be flushed from the pump before shutdown.

## Specification data sheet(both 50Hz and 60Hz pump)

Model	No. of Pump	Bellows Size (mm)	Max capacity (ml/min)		Stroke per minute(SPM)		Max Pressure (Mpa, PSI)	Connection size (mm,inch)	motor power (w)	Self-priming height (cm)
			50Hz	60Hz	50Hz	60Hz				
DZ-1X(or DZN-1X)	single	20	29	35	10	12	0.04(5.8)	9(0.35)	5	50
DZ-2X(or DZN-2X)	single	40	119	141	10	12	0.03(4.4)	9(0.35)	5	50
DZ-2Y(or DZN-2Y)	single	40	175	210	15	18	0.02(2.9)	9(0.35)	5	50
DZ-2Z(or DZN-2Z)	single	40	232	278	20	24	0.01(1.5)	9(0.35)	5	50
2DZ-1X(or 2DZN-1X)	double	20	58	70	10	12	0.03(4.4)	9(0.35)	5	50
2DZ-2X(or 2DZN-2X)	double	40	238	282	10	12	0.02(2.9)	9(0.35)	5	50
2DZ-2Y(or 2DZN-2Y)	double	40	350	420	15	18	0.01(1.5)	9(0.35)	5	50
2DZ-2Z(or 2DZN-2Z)	double	40	464	556	20	24	0.01(1.5)	9(0.35)	5	50
3DZN-1X	three	20	87	105	10	12	0.03(4.4)	9(0.35)	5	50
3DZN-2X	three	40	357	423	10	12	0.02(2.9)	9(0.35)	5	50
3DZN-2Y	three	40	525	630	15	18	0.01(1.5)	9(0.35)	5	50
3DZN-2Z	three	40	696	834	20	24	0.01(1.5)	9(0.35)	5	50
4DZN-1X	four	20	116	140	10	12	0.03(4.4)	9(0.35)	5	50
4DZN-2X	four	40	476	564	10	12	0.02(2.9)	9(0.35)	5	50
4DZN-2Y	four	40	700	840	15	18	0.01(1.5)	9(0.35)	5	50
4DZN-2Z	four	40	928	1112	20	24	0.01(1.5)	9(0.35)	5	50
DS-1F	single	20	115	139	40	48	0.08(11.6)	9(0.35)	8	100
DS-1P	single	20	200	243	70	84	0.08(11.6)	9(0.35)	8	100
DS-1Q	single	20	260	310	90	108	0.08(11.6)	9(0.35)	8	100
2DS-1F	double	20	230	278	40	48	0.08(11.6)	9(0.35)	8	100
2DS-1P	double	20	400	486	70	84	0.08(11.6)	9(0.35)	8	100
2DS-1Q	double	20	520	620	90	108	0.08(11.6)	9(0.35)	8	100
DS-2E	single	40	357	428	30	36	0.08(11.6)	9(0.35)	8	100
DS-2F	single	40	460	552	40	48	0.08(11.6)	9(0.35)	8	100
DS-2G	single	40	570	685	50	60	0.08(11.6)	9(0.35)	8	100
DS-2P	single	40	798	995	70	84	0.08(11.6)	9(0.35)	8	100
DS-2Q	single	40	990	1180	90	108	0.08(11.6)	9(0.35)	8	100
2DS-2E	double	40	714	856	30	36	0.08(11.6)	9(0.35)	8	100
2DS-2F	double	40	920	1104	40	48	0.08(11.6)	9(0.35)	8	100
2DS-2G	double	40	1140	1370	50	60	0.08(11.6)	9(0.35)	8	100
2DS-2P	double	40	1596	1990	70	84	0.08(11.6)	9(0.35)	8	100
2DS-2Q	double	40	1980	2360	90	108	0.08(11.6)	9(0.35)	8	100
DZR-2X	single	40	100	120	10	12	0.01(1.5)	9(0.35)	6	
DZR-2Y	single	40	150	180	15	18	0.01(1.5)	9(0.35)	6	
DZR-2Z	single	40	200	240	20	24	0.01(1.5)	9(0.35)	6	

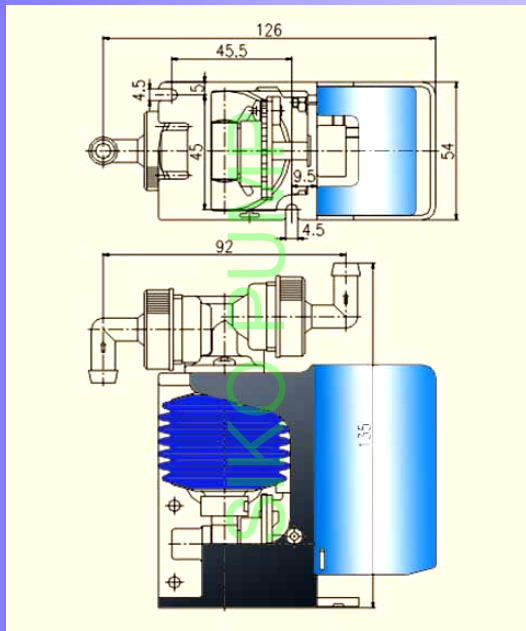
**Model meaning**, for example: 3DZ-2Y, "3" mean the number of the pump connected, DZ(or DZN, DS, DZR) are the pump models, "2" means the size of bellows, (1 for 20 mm, 2 for 40mm), "Y" means the pump stroke per minute, 15 stroke per minutes(or the pump speed)

**Pump motor Voltage can be in 100V, 220V, 110V, 240V and so on**

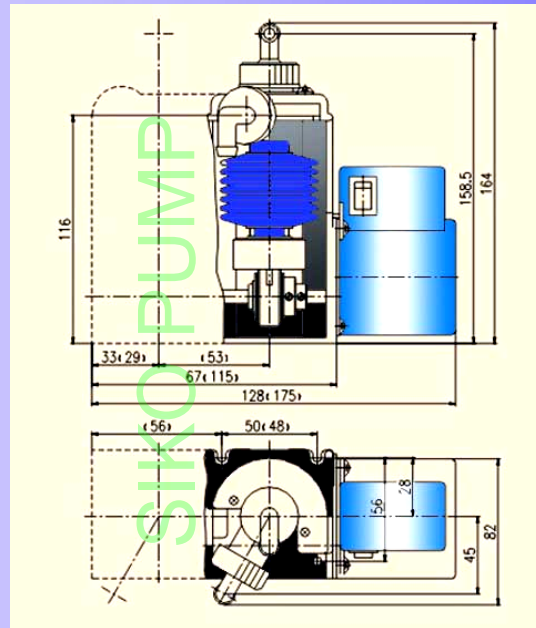


## Dimension Size(mm)

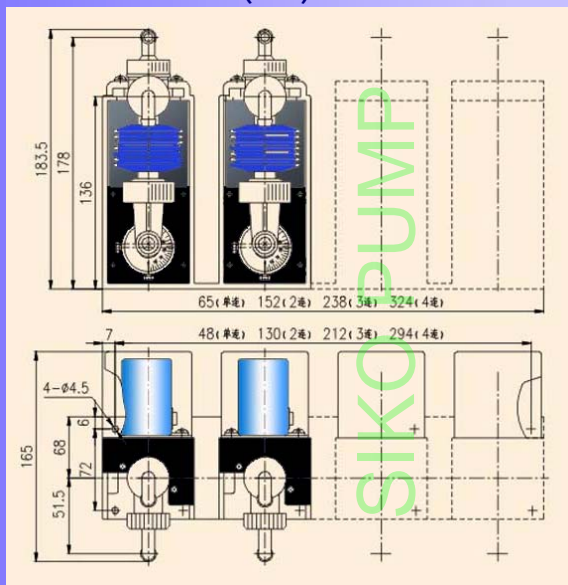
DZR



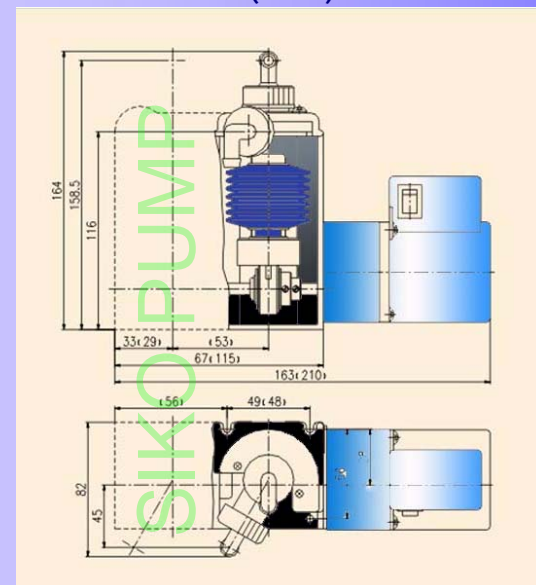
DZ



DS(2DS)



DZN(2DZN)



## Application

- ◆ Automatic development of color film, expansion of photograph, X-ray film, microfilm, cine film and etc
- ◆ It is used in beverage vending machine
- ◆ Sticking liquid and mediation
- ◆ Quantitative replenishment of food additive
- ◆ The etching and cleaning of electronic basic plate printing circuit
- ◆ The neutralization of acid and alkali for water treatment the utilization of condensating separation agent



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**As we are constantly endeavoring to improve the performance of our equipment,**

**The company reserves the right to make alteration from time to time and equipment will maybe differ from that detailed in this brochure.**