

Signal
S100 SERIES



S100 PZ Series Solenoid-Driven Metering Pumps

Models PZ/PZL/PZD/PZi4/PZi8

Operating capacities from 0.09 to 32.4 litres/hour from 10 to 2 bar

- **World's first** multi-range power supply pump – operates within range of 90 to 264 volts AC without affecting performance.
- Robust design with few moving parts and low maintenance.
- Control options include manual, level, pulse and 4-20mA inputs.
- IP65 rating gives ingress protection against water jets and dust.

S100 PZi Series

Solenoid-Driven Pump

These renowned intelligent pumps bring you a number of advanced features, giving automatic control of the pump, higher precision injection and easier system control. Select from two variants of this intelligent metering pump:

PZi4 input control model

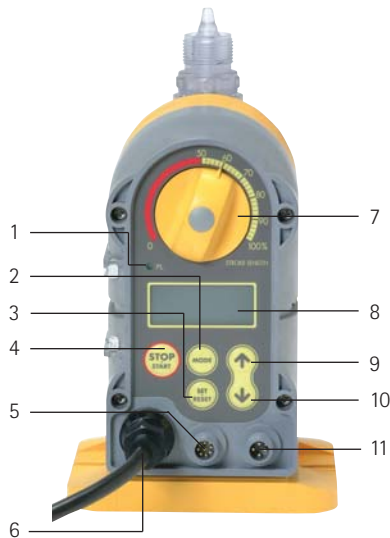
0.09 to 32.4 litres/hour

With automatic operation allowing easy proportional injection of chemicals. Pulse signal input with pulse multiplication/division means that the pump can operate from pulse generation control, such as a flow meter. An analogue signal is also accepted. An optional low level switch cut out stops the pump automatically.

PZi8 input/output control model

0.09 to 6 litres/hour

Purpose-designed to meter very low flow rates, it combines all the features of the PZi4 with the addition of two pulse outputs and pump operational signal, together with automatic counter/times operation.



HIGH-SPEC CONTROL VARIATIONS				
Model		PZi4 (input control model)	PZi8 (input/output control model)	
Strokes per minute (spm)		0 to 300 spm (1 spm increments)		
Stroke length adjustment		50 to 100%		
Number of input ports	Analogue input	1	1	
	Digital input High speed/low speed	1/1	2/2 (1/2)	
Number of output ports	Digital output	-	•	
	Power supply for flow checker	-	•	
LCD display	Display unit switchable	-	•	
Manual Operation	Manual mode	•	•	
Automatic operation	Analogue mode	Signal	4 to 20 mA	4 to 2 mA/0 to 20 mA
	Frequency-division mode		1/1 to 1/9999	1/1 to 1/9999
	Multiplication mode/surplus signal processing		1 to 9999 times / -	1 to 9999 times / •
	Count mode	spm	-	1 to 9999 (x1, 10, 100, 000)
Control input	Interval mode	on/off time	- / -	1 to 9999 (min/1 to 9999 min)
	External stop signal		•	•
	Level switch signal		-	•
	Variable reset signal		-	•
	Start/reset signal		-	•
Control output	Operational signal		-	•
	Operational sync pulse signal		-	•
	Count end signal		-	•
Alarm	Analogue input error		-	•
	Pulse input memory over		-	•
	Abnormal level error		-	•
	Injection monitor		-	•

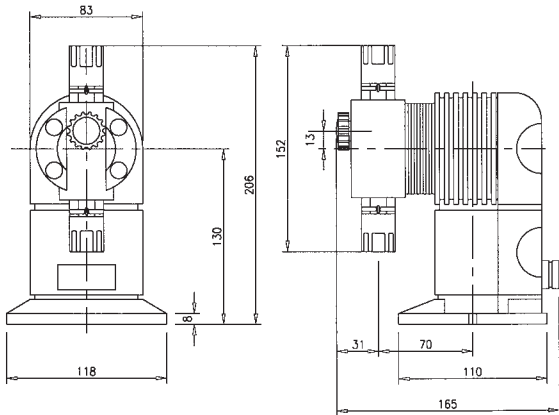
1. Pilot light
2. Mode key
3. Set/reset key
4. Stop/start key
5. 8-pin signal connector (PZi8 only)
6. Power input socket
7. Stroke length adjusting dial
8. LCD Display
9. Up key
10. Down key
11. 4-pin signal connector

TECHNICAL DATA - PZi SERIES									
Specification	Model								
	PZi4-30	PZi4-60	PZi4-100	PZi4-300	PZi4-500	PZi8-30	PZi8-60	PZi8-100	
Max. discharge volume (l/h)	1.8	3.6	6.0	21.6	32.4	1.8	3.6	6.0	
Max. back pressure (bar)	10	8	4	3	2	10	8	4	
Stroke frequency (spm)	1 to 300					1 to 300			
Connection aperture (mm)	Discharge side	6/8	6/8	6/8	9/12	9/12	6/8	6/8	6/8
	Suction side								
Weight (kg)	1.7	1.8	1.8	4.0	4.0	1.7	1.8	1.8	

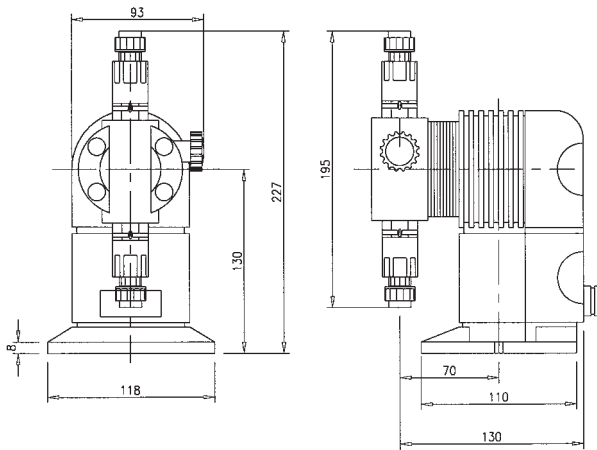
NOTES: 1. Discharge volume values are for reference only and may differ slightly according to individual site conditions and product differences (conditions: room temperature, clean water, suction height -1.5m)
 2. Maximum discharge viscosity is 50 mPa·s
 3. The solenoid is not explosion-proof. Take sufficient note of this when selecting the model.
 4. These values are for liquid-end material types FEC, FFC, VEC, VFC and CL. Contact **Signal** for other materials.
 5. Hose is provided in the case of FEC/FFC (CL on ARPZi) type.

EXTERNAL DIMENSIONS

Model PZ-30/60/100
PZL-30/60/100
PZD-30/60/100/300/500



Model PZi4-30/60/100 (FEC, FFC, FTC type)
PZi8-30/60/100 (FEC, FFC, FTC type)



Drawing dimensions may vary depending upon model/pump head. mm (unless stated)

S100 Accessory Range

Optional equipment for enhancing the control and performance of the PZ pump series.

Foot valve and strainer

Assists in maintaining the prime of the pump under suction lift conditions and prevents large solids from entering the pump.

Suction lance

Combining a foot valve and strainer, the suction lance is inserted into the suction vessel, where it ensures maximum draw-down. It allows low level switching to stop the pump and can provide low-level cut-out. A further option of low-level warning may be incorporated.

Injection fitting

This maintains back pressure on the pump, even when the pump is disconnected. It generally assists with the control of flow and also injects material into the centre of the flow. Additionally, it serves as an anti-syphon device and non-return valve.

Pressure loading valve

On systems operating below 1 bar, the pressure loading valve maintains back pressure on the pump and ensures that accurate flow control is sustained. It also serves as an anti-syphon device.

Pressure relief valve

A safety device that protects the pump and system from damage if over-pressure occurs.

Multifunction valve

Combines the function of pressure loading and pressure relief valve into a single unit that saves in installation cost and provides anti-syphon protection and drain facility.

Flow checker

A unique flow metering device that provides remote or local feedback on actual pump output.

Electronic controller

A complete control system that provides a loop back to the pump to maintain the required chemical dose. It can make the system more efficient and more economical.

Pulsation damper

Fitted to the suction or discharge side of the pump, it reduces pressure surges on arduous applications such as long dosing lines.

Tubing

Available in a wide range of diameters and materials, including PVDF, PFA, PE, nylon-reinforced PVC and others on request.

Tank and pump sets

A stand-alone and single-sourced chemical delivery system that can be bundled if required and can incorporate stirrers. Pre-engineered and tested, they are delivered to site ready to install and are available in a range of tank capacities up to 4,500 litres - although larger sets can also be engineered.

FURTHER TECHNICAL SUPPORT

The **Signal** team of fully qualified sales engineers are on hand to assist you in any aspect of metering pump technology. Whether you need advice on general application needs, metering, pump performance, health and safety, product selection, accessory choice, ongoing operation or maintenance issues, please call a member of our **Technical Team on 0121 326 1745**

We are here to support you before your purchase – and right through the long service life of your **Signal** pumps.

Signal Metering Pumps
Gee House
Holborn Hill
Birmingham B7 5JR
T 0121 326 1745
F 0121 326 1779
E info@signal-pumps.co.uk
W www.signal-pumps.co.uk

A division of **GEE & CO**