
Number: 05-2007-045 **Date:** November 16, 2007
Product: Z-Series
Title: Z-Series Description, Models, and Specifications

Summary: This document provides Z-Series Instrument general information and specifications. There are three Z models: **Z1 single threshold (S/T)**, **Z1 dual threshold (D/T)**, and **Z2**.

General Information: The Z-Series particle counters utilize the “electric sensing zone method” for sizing and counting particles. This method is based on the detection and measurement of changes in electrical resistance produced by a particle or cell suspended in a conductive liquid (diluent) traversing through a small aperture. This is known as the Coulter Principle.

Models, Description, and Specifications:

Z1 S/T	Single threshold
Z1 D/T	Dual threshold (otherwise the same as a Z1)
Z2	Dual threshold with channelyzer and computer interface capability

The following description is for all three models:

Accuracy: Within +/- 1% of a reference counter system

Precision: Better than 1% CV at metered volumes 0.5 and 1.0 ml
Better than 2% CV at metered volume of 0.1 ml

Aperture tube sizes: 50, 70, 100, 140, and 200 micron

Aperture tube particle range: 2 to 60% of aperture diameter

Total size range capability: 1 to 120 microns

Small ampoule aperture sizes: 50, 70, and 100 micron

Electrolyte solution: 1 to 5% sodium chloride, 2 to 5% sodium phosphates, Isoton II & Isoton III

Environment: placement not subject to vibration, airborne dust, electrical interference, spillage or splashing

Humidity, relative: 10 to 85% without condensation

Temperature operation: 10 to 35 degrees C

Voltage frequency: 47 to 63 Hz

Voltage input: 100 Vac, 120 Vac, 230 Vac, 240 Vac +/-10%, single phase

Power: Less than 55 Watts

Sampling volumes: 0.1 ml, 0.5 ml, and 1.0 ml

***Printer interface:** Centronics parallel, 25-way "D" connector

* The printer must be an HP Graphics Language 2 (GL-2) or higher as in the HP LaserJet 4L family on up. Printer types are not selectable on the Z-series. We recommend purchasing the printer from us to ensure compatibility.

Additional Z2 Features

- Provides a channelized size distribution of the cell population
- Provides averaged results from up to ten consecutive automatic runs
- Allows data acquisition to a computer via the AccuComp® software program

Weights and Measures

Z Series COULTER COUNTER	
Weight:	13.5 kg (30 lbs)
Height:	44.5 cm (17.5 in.)
Width:	26.5 cm (10.4 in.)
Depth:	35.5 cm (14.0 in.)
Keypad/Display:	6.4 cm (2.5 in.) x 15.5 cm (6.1 in.) x 15.1 cm (5.9 in.)
Keypad/Display Weight:	0.7 kg (1.5 lbs)
Fill/Waste Station:	19 cm (7.5 in.) x 28.5 cm (11.2 in.) x 16.5 cm (6.5 in.)
Fill/Waste Station Weight:	1.3 Kg (2.9 lbs)

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