

52PC Particle Counter

The 52PC Particle Counter performs laser-based ISO particle counting of lubricants and hydraulic fluids. This instrument is an essential element of a lubrication contamination control program. The 52PC unit is designed for easy upgrade to the full range of measurements found in the CSI 5200 Machinery Health Oil Analyzer.

- Accurately count solid particles in eight independent size ranges.
- Retain large particles for counting without loss to sample bottom.
- Test samples from very clean (0.2 particles per ml) to very dirty 1,500,000 particles per ml).
- Test mineral and synthetic oils.
- Test used oil from hydraulic, gear, pump, compressor, turbine, motor, and other industrial machinery.
- Test water-contaminated oils and water-glycols.
- Test dark and colored oils.
- Test oils containing entrained air-patented degas method.
- Test wide viscosity range (ISO VG 3 to ISO VG 680)
- Small sample volume (15 ml typical, 2 ml minimum).
- Two-minute sample-to-sample test time.

Physical Dimensions:

- Depth: 14.25 in. (36.2 cm)
- Height: 17.87 in. (45.4 cm)
- Width: 17.25 in. (43.8 cm)
- Weight: 22 lbs. (10 kg)

Power Supply:

- 100-240 VAC, 6A, 47-63 Hz input
- 15V DC, 7.5 A output

Interface:

- IBM PC compatible software
- Software controls instrument and records data
- 9-pin sub-D cable via RS232C interface to PC
- 9-pin sub-D cable via RS232C interface to electronic balance
- Swagelok® connections to waste and back-flush

Outputs per ISO 11,171 (modified) using A475100

Minilab Software:

- Particle counts >4-m; >6-m; >10-m; >14-m; >22-m; >38-m; >56-m; >70-m
- ISO 4406 codes for (>4-)/(>6-m)/(>14-m)
- Plot ISO and counts vs. size distribution
- Minimum ISO code = 6 (0.2 particles/ml)
- Maximum ISO code = 27 (1,500,000 particles/ml)



- ppm v/v >4-m, 4- to 6-m, 4- to 14-m, >14-m
- Plot ppm v/v vs. size distribution
- Calculate total volume of dust-in-oil (ml)

Output per ISO 4402 (modified) using A475100 Minilab

Software:

- Particle counts >2-m; >5-m; >10-m; >15-m; >25-m; >50-m; >75-m; >100-m
- ISO 4406 codes for (>2-)/(>5-m)/(>15-m)
- Plot ISO code and count vs. size distribution

Output per ISO 4402 (modified) using A475100 Minilab Software (continued):

- Minimum ISO code = 6 (0.2 particles/ml)
- Maximum ISO code = 27 (1,500,000 particles/ml)
- Extended NAS 1638 code
- Plot NAS counts vs. size distribution

Solvent:

A suitable solvent must be obtained for dilution and cleaning. Extra pure lamp oil (basically odorless kerosene) is inexpensive, widely available, and works well for most samples. Special solvents can be used for water-masking purposes (e.g., particle counting even with water-contaminated samples). Water-masking procedures and solvents are described in the OilView User Manual 97381.

Hardware Conditions:

- Storage: 32-120 F (0-50 C)
- Operation: 59-86 F (15-30 C)
- Sample prep and test time: about 2 minutes
- Sample volume: 1 ml to 30 ml
- Fluids tested: mineral and synthetic oils and hydraulics
- Cleaning: flush with same solvent used for dilution
- Back-flush through sensor if needed
- Calibration: use AC/FTD or MTD standards
- Recalibration: user performs using A475100 software

Standard Accessories:

- PN 93035 electronic scale with RS232 interface for measuring dilutions
- Waste container system
- Consumables starter kit
- Vacuum pump (A5051VP-DM 115V or A5051VP-IN 220V)
- A5000CD OilView Lite software

Optional Accessories:

- A475100 OilView Minilab software
- A475101 OilView LIMS software
- On-site minilab startup service
- OilView for AMS Machinery Manage training class
- A5051SF Solvent Filtration Device

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