



PARTICLE COUNTER SENSOR PC6 with HydroACT Series

DESCRIPTION

The **PC6 Particle Counter Sensor** provides the highest level of assurance when it comes municipal and industrial water treatment applications including filter performance monitoring, protecting RO membranes from colloidal fouling, corrosion product monitoring, and virtually any application where there is a concern of potential contamination in a clean liquid. The PC6 offers an excellent addition or alternative to other traditional measurements like turbidity (NTU) and Silt Density Index (SDI) testing. Particle counters are best known for their ability to detect when a filter has reached the end of its run well ahead of any impact to NTU readings. The more compact PC6 Particle Counter brings all the great features of Chemtrac's larger stand alone models (i.e. PC3400 & PC4400) to the **HydroACT** family of analyzers. Customers can connect multiple sensors to the HydroACT analyzer, or mix and match the PC6 with other measurements like pH, chlorine, and UV254 for organics monitoring. The PC6, with its unique parts per billion (ppb) readout option, allows the user to view up to 6 channels of data in multiple measurement formats including "Total ppb", "Total Counts", and counts or ppb in individual size channels (e.g. 2 to 5 micron, 5 to 10 micron, etc.). Full integration between the sensor and analyzer means all sensor settings, including user-friendly calibration features, can be accessed from the HydroACT's user interface. Contact Chemtrac to discuss your application and let us find the right solution for you.

STANDARD FEATURES

- Parts-per-billion (ppb) measurement with detection down to 0.01 ppb
- Counts particles in liquid from 2-750 microns
- Sizes particles from 2-100 microns
- Up to 6 user programmable size ranges
- Reports cnts/mL, or cnts/100mL, ppb
- User-friendly, menu driven calibration
- Laser & cell condition readout (0-100%)
- External sensor with sapphire optics
- Available with HydroACT analyzer models HA2, HA4, and HA8



BENEFITS

- Familiar volumetric concentration readout (ppb) for particles greater than 2 microns
- Provides a reliable and accurate measurement of particles down to low ppt levels
- Advanced firmware and menu functions eliminates need for external software to perform setup and calibration
- User-friendly calibration routine makes the process fast and simple, and lowers maintenance cost
- External sensor is easy to clean and water is kept away from electronics

APPLICATIONS

Water Treatment

Wastewater Treatment

Reverse Osmosis Pretreatment

Membrane Filtration

Aquatics

Boiler/Condensate

Parts Washing

Food & Beverage

Pharmaceutical

Particle Detection

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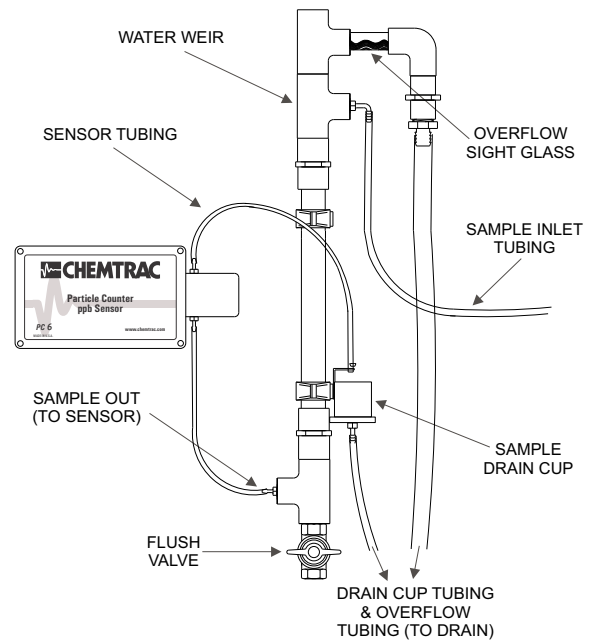
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GENERAL SPECIFICATIONS

PARTICLE COUNTER SENSOR

Laser Type	Solid-state laser diode (780nm)
Cell Material	Nituff coated aluminum PEEK plastic (optional)
Viewing Windows	Sapphire
Detection Range	2-750 microns
Sizing Range	2-100 microns
ppb Range	0.01-10,000 ppb - calculated volumetrically for particles larger than 2 micron
Analog Output Type	4-20mA
Flow Rate	75 mL/min
Resolution	Better than 10% at 10 micron (ASTM-F658)
Coincidence Limit	20,000 cnts/mL (2 micron)
Signal to Noise Ratio	Better than 3:1
Size Channels	6 user-selectable; each size channel counts as a parameter on HydroACT analyzers
Alarms	Sensor diagnostic, low cell condition
Laser Diode Life	MTBF 75,000 hours @ 55° C
Measurement Type	Light obscuration, volumetric
Display Readout	Size channel, counts, parts-per-billion (ppb), cell condition (0-100%), laser condition (0-100%), sample period, sample frequency
Dimensions	4.7 in (120 mm) x 10.3 in (252 mm) x 3.5 in (90 mm)
Weight	2 lbs (0.91 kg)

PC6 and Weir set-up



ANALYZER

HA2

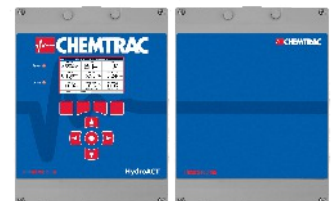
HA4

HA8

	HA2	HA4	HA8
Power	100-240 VAC / 0.25 A or 12 VDC / 0.8 A (standard) or 24 VDC (optional)		
Display	4.3", 480x272, 8 bit, grayscale	4.3", 480x272, 24 bit, color	
Sensor Inputs	Up to 2	Up to 4	Up to 8
Sensor Options	Particle Counter, SCM, UV254 organics, TSS/NTU, DO, Conductivity Free Cl, Total Cl, Cl Dioxide, Chlorite, Ozone, pH with Temperature, ORP		
External Input (optional)	4-20 mA, 4-20 mA loop-powered, +/- 2000 mV for pH / ORP / ISEs		
Analog Outputs (optional)	Up to 2	Up to 4	Up to 8
	Menu configurable outputs: 4-20 mA (Note: unused sensor inputs can be used as outputs)		
Relays (optional)	Up to 4	Up to 8	Up to 16
	SPST, electromechanical, 380 VAC, 6 A max		
Digital Inputs (optional)	Up to 4	Up to 8	Up to 16
Alarms & Thresholds	2 user-configurable alarms & thresholds with deadband and delay for each parameter and control output		
Control Loops (optional)	Up to 2	Up to 4	Up to 8
Control Types (optional)	High / Low Threshold	PID (with start delay and SP ramping options), feed forward (NTU/UV), flow pacing, high/low threshold, timer	
Communication (optional)	Modbus ASCII/RTU (RS485), Modbus TCP (Ethernet), PROFIBUS DP		
Data & Event Logging	1,000 event / status records stored in internal memory	1 million records stored internally storage expandable with MicroSD card	
Modem (optional)	None	GSM / GPRS / 3G intergrated modem	
Remote Access (optional)	None	Internet browser access, alerts and reports via email (requires ethernet or modem card)	
Enclosure	ABS flame retardant, NEMA 4X / IP65		
Dimensions & Weight	HA2 & HA4: 9 in (230 mm) x 12.2 in (309 mm) x 4.1 in (103 mm); 4.4 lbs (2 kg) HA8: 18 in (460 mm) x 12.2 in (309 mm) x 4.1 in (103 mm); 4.4 lbs (2 kg)		



HA2 / HA4



HA8