

PSS20

Particulate Sampling System

Dynamic Diesel Emission Technology



Higher demands for cost reduction, enhanced process and engine control efficiency, coupled with increased environmental awareness is pushing the development of faster, more cost effective, and more sensitive next generation particulate analyzers. With years of advanced technical development and particle monitoring experience these demands have been met with the PSS20 Particulate Sampling System.

The PSS20 system is a partial flow dilution microtunnel designed for sampling diesel exhaust gas, diluted or not, transient or stationary, to determine particulate emission levels. The principle of partial sampling of gases makes it possible to utilize the system on any size diesel engine from a few KW to large naval engines in any test cell or location.

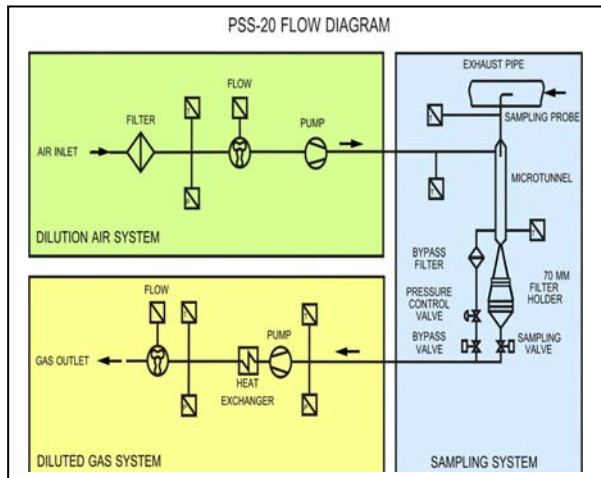
The PSS20 is designed for today's new engine concepts and with today's diesel engines lower than ever particulate output can provide precise gravimetric particle measurements. Cost effectiveness exists as the PSS 20 can replace the costly and complex CVS method of PM measurements.

National and International PM sampling regulation requirements such as EEC, ISO -8178, and ISO 16183 are met or exceeded.

The application flexible system consists of two main units. A mobile control cabinet and one mobile sampling and dilution unit. This allows the system close proximity to the engine and at most any orientation to accommodate any test cell configuration.

Technical Data

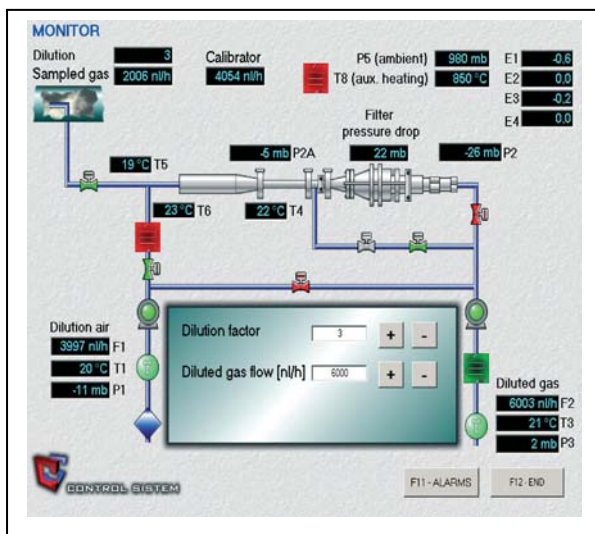
Dilution Air Flow	1 – 10 m ³ /h	Diameter- Mini-tunnel	38 mm
Total Flow	1 - 10 m ³ /h	Length – Mini-tunnel	250 mm
Gas Volume Measure	Mechanical Flowmeters Digital Encoders	Filter Holder	70mm, 47mm
Resolution	14,000 pulse/L	Multiple Filter Holder	Double or multiplexer unit
Accuracy	+/- 0.1 %	Voltage Supply	110V/60Hz
Response Time (T50)	< 0.3 sec	Ambient Temp.	10 – 40 deg. C
Control Unit	PC Workstation Flat screen , Touchpad	Dilution Unit	1200 x 300 x 800 mm
Signal Processing And Interface	WAGO I/O Serial/TCP IP	Control Unit	600 x 800 x 1600 mm



Function and Technology

The heart of the PSS20 are the low inertia mechanical type flowmeters connected to variable speed volumetric pumps. This unique and highly proven configuration makes it possible to obtain a system response time, in transient test cycles, of less than 0.25 sec. (In accordance with ISO 16183). The mechanical type flow measurement system offers ultra high instrument stability and measurement repeatability that dramatically reduces the need for costly and intensive systems calibration.

The PSS20 is simple to operate and the user friendly interface provides easy to decipher continuous process updates of all relevant test parameters for maximum results every test. All components work self-sufficiently and do not require expensive and cumbersome auxiliary gases. All components are made up of the highest construction graded materials, designed for long term operation and optimum up time.



Benefits:

- Ultra fast response to gas characteristics means highest total particulate measurement accuracy
 - Unique flow measuring technology means long term stability and minimal drift
 - Extreme ease of installation, start-up, and operation. Low maintenance costs
 - USA and EU regulatory compliant

V&F has been providing quality high-speed analytical equipment and accessories to industry and research for over 15 years.

Our innovative real time gas and particulate analyzers are configured to client specifications to provide optimal and timely emission or process information for most any industrial or research application.

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