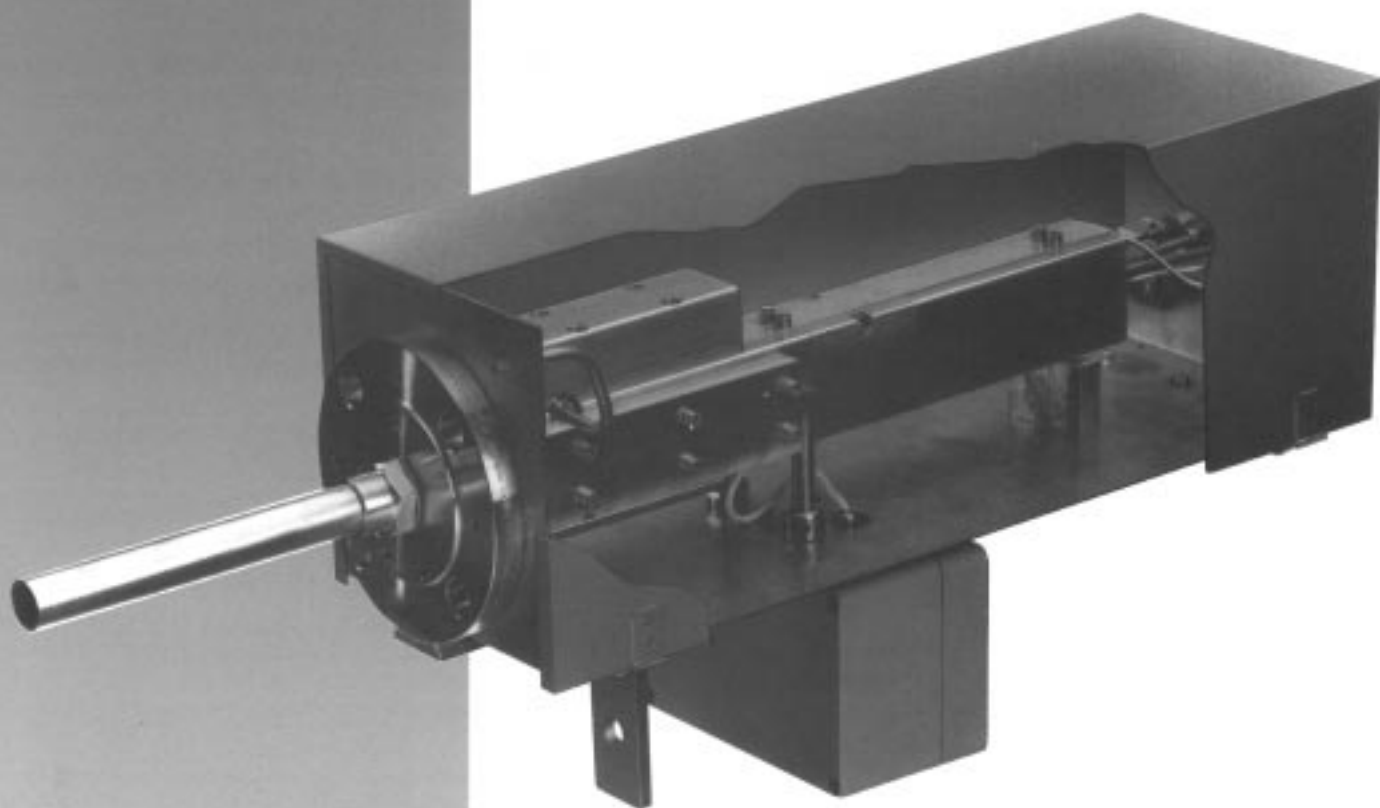


MODEL 797.380

Out of stack diluting sampler



Continuous emission monitoring
and gas analysis
Dilution is the solution

EPM ENVIRONMENTAL

MODEL 797.380

OUT OF STACK SAMPLER FOR MONITORING GASEOUS EMISSIONS WITH AMBIENT AIR ANALYZERS

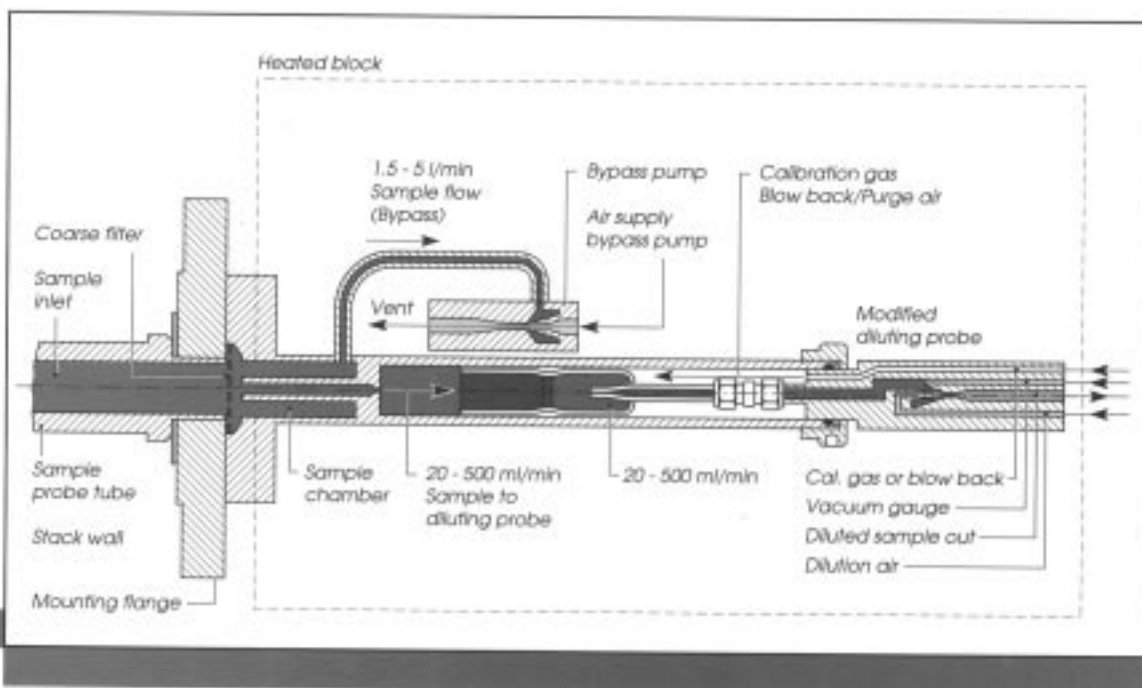
The EPM Out of Stack (OOS) Dilution System is designed for emission monitoring applications where in-stack installation of the well known EPM dilution probe system is impractical. It uses the same basic sampling technology as our popular conventional in-situ dilution probe, yet all critical parts are mounted externally for quick access and easy maintenance.

4" and 6" 150 lbs flange mounting adaptors are available in 316L stainless steel, Inconel 600® or Hastelloy®. They can be supplied as separate parts or as complete adaptor kits. Some of the key advantages of the OOS Sampling Systems are listed below:

FEATURES

- Designed for easy access to consumable and replacement parts.
- Heated sampling assembly utilizes dual 400 W heaters.
- Easy dynamic in-situ calibration.
- Low sample flow rate utilizes bypass pump for sampling protection.
- Corrosion resistant design, available in 316L stainless steel, Inconel 600 and Hastelloy C-22.
- Selectable dilution ratios.
- Blowback port for manual or automatic operation.
- Integral mounting flange and optional adapters.

Figure 1



BENEFITS

- Low cost maintenance and operation. Minimizes downtime.
- Assures reliable sample stability and reduces moisture in the sample.
- Provides total system accuracy, with low cal. gas consumption.
- Well suited for high particulate and wet samples. Promotes long filter life.
- Can withstand constant exposure in the harshest stack environments.
- Usable with a wide range of ambient air analyzers.
- Allows remote backflush of coarse filter.
- Provides a strong, single mounting point. Adaptable to a variety of port sizes.

WORKING PRINCIPLE

The OOS system consists of a sampling pipe, a sampling chamber with by-pass pump and a dilution probe.

Undiluted stack gas is continuously drawn through the sampling pipe and into the sampling chamber by a by-pass pump at a rate of 1.5 to 15 liters per minute; a vent in the sampling chamber ensures a constant flow of "fresh" stack gas through the chamber.

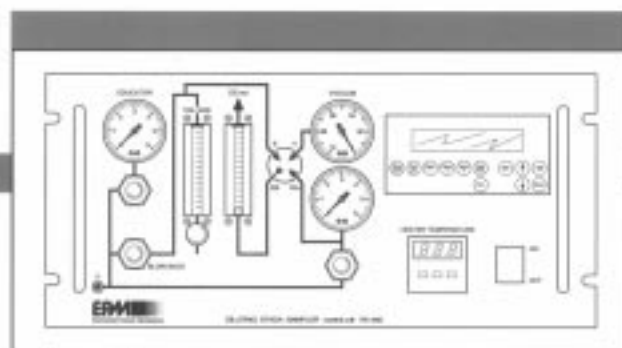
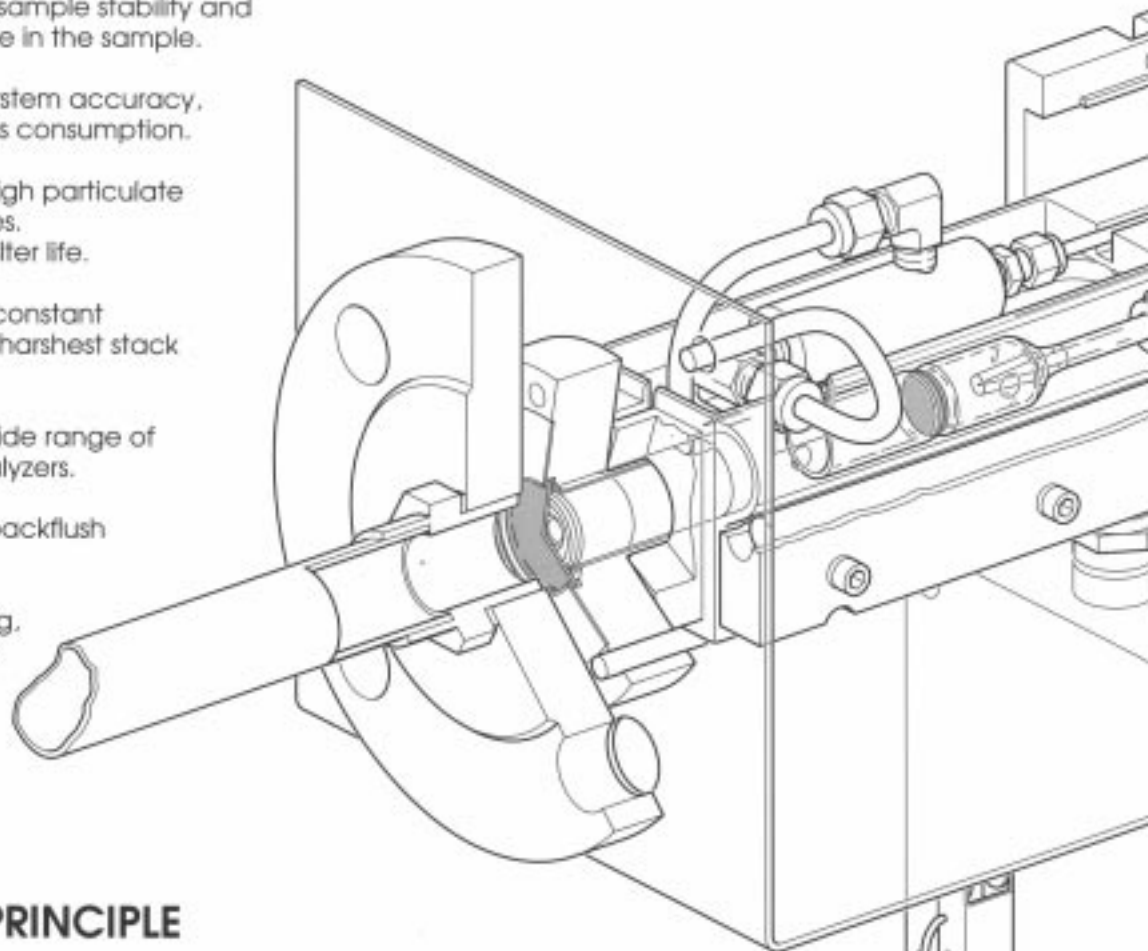
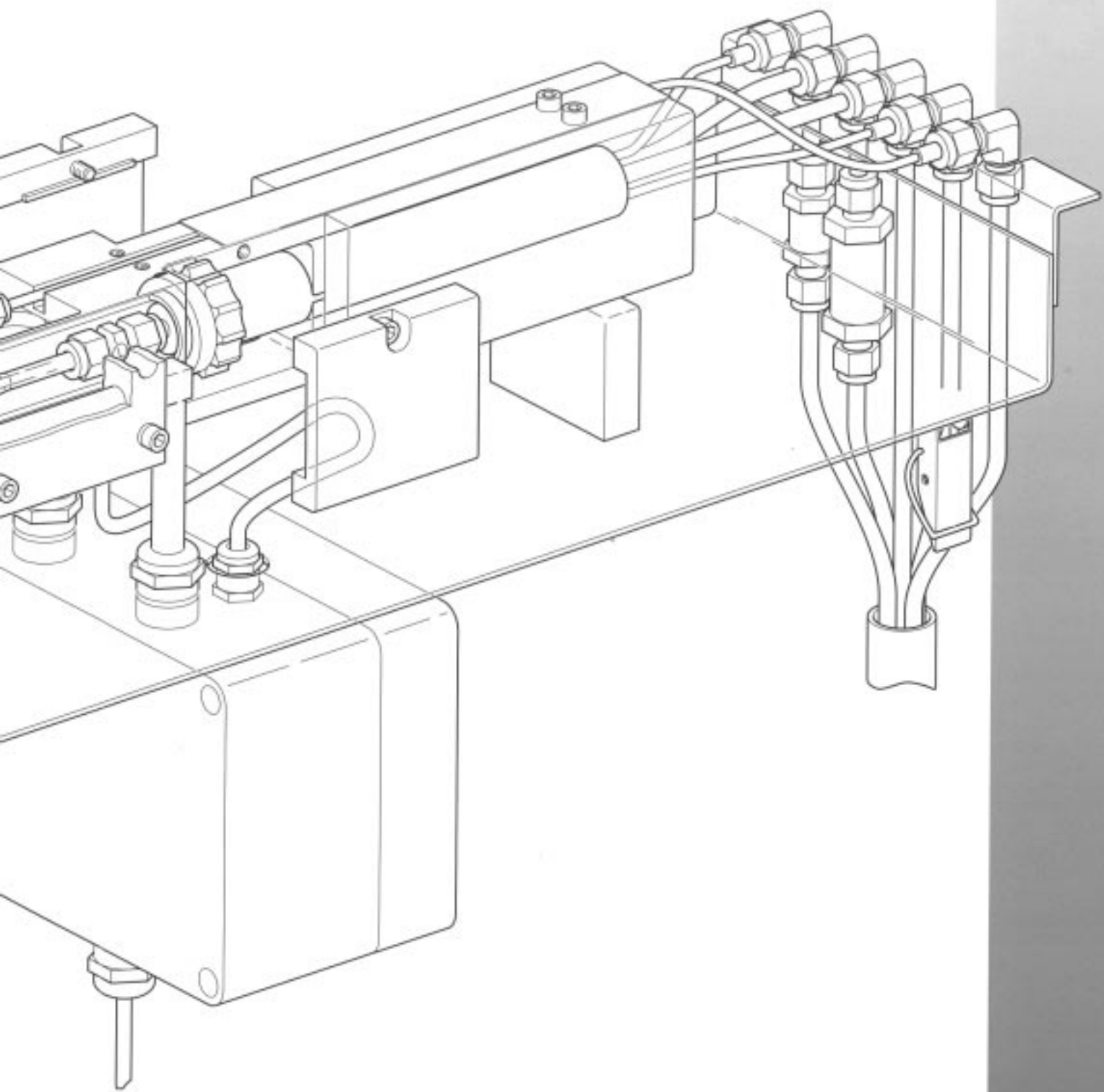


Figure 2



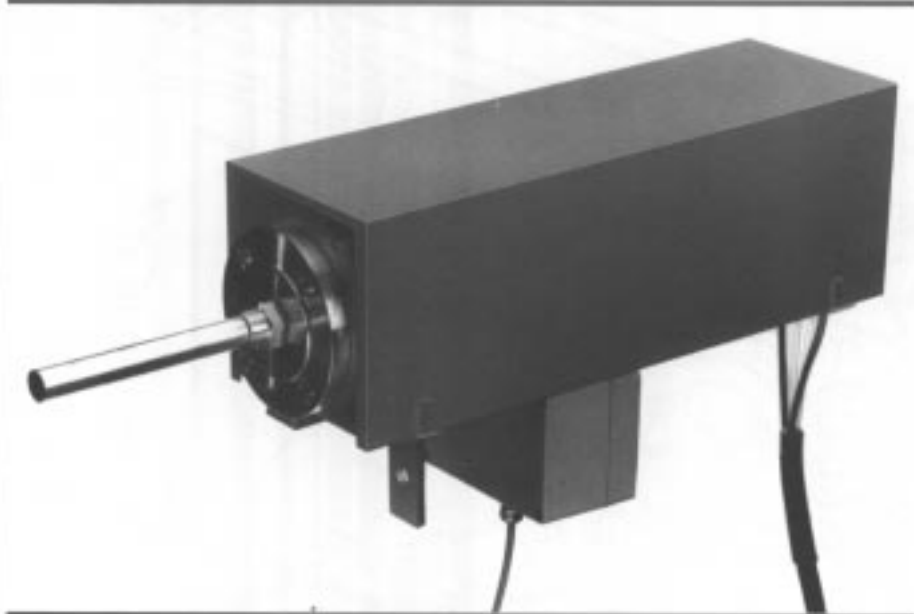
The dilution probe draws a small sample of the gas out of the chamber through a sampling tube at a flow rate determined by the critical orifice of the probe.

The sample is then drawn through the critical orifice, diluted with clean dry air, and transported to the analyzer via the umbilical cord of the probe.



MODEL 797.380

Out of stack system



TECHNICAL SPECIFICATION AND ORDERING INFORMATION

GENERAL DIMENSIONS:

Length x width x height: 615 (24.2") x 213 (8.4") x 333 (13.1")

Weight: 20 kg (45.91 lb)

MATERIALS:

Housing : Stainless steel: AISI 316L with SS A4 fasteners.

Heater : Aluminum heated (probe) block.

Probe : High grade stainless steel.

All wetted parts are made of respectively AISI 316L or INCONEL 600 or HASTELLOY C22.

INSTALLATION:

The OOS-system can directly be bolted onto a 2" ANSI flange.

The sampling pipe (1" O. D., wall thickness and length according to application) may be supplied by EPM or by customer (to be specified when ordering).

The sampling pipe is mounted with and welded onto the flange nut.

The following flange nuts are available and are to be specified when ordering:

Flange Nut 0042.133 - Inconel 600
Flange Nut 0042.134 - Hastelloy C22
Flange Nut 0042.135 - AISI 316L

ELECTRICAL:

The OOS-system is heated by two electric heaters, one fitted at each side of the probe.
Power consumption of each heater is 400 Watts at rated 115 Volts or 230 Volts A.C. A built-in type K thermocouple is used as the temperature sensor.
Mains voltage to be specified when ordering.

BYPASS PUMP:

There are several bypass pumps available, the type of pump must be specified when ordering.
Bypass pump 0797.370, especially made for low air consumption.
Drive air input : 6 - 30 l/min. at 0.5 - 4 bar
Sample intake : 4 - 7.8 l/min
Material : AISI 316L

Bypass pump 0797.371 especially made for high air consumption.

Drive air input : 7 - 45 l/min at 0.5 - 5.5 bar
Sample intake : 2 - 20 l/min
Material : AISI 316L

Bypass pump 0797.375: Same as 0797.371, however:
Material: HASTELLOY C22

Bypass pump 0797.375: Same as 0797.371, however:
Material: INCONEL 600

Specify bypass pump when ordering.

CRITICAL ORIFICE:

Nominal flow ml/min	Dilution ratio		part#
	min.	max.	
20	215:1	350:1	2126.064
50	95:1	150:1	2126.047
100	44:1	75:1	2126.044
150	32:1	50:1	2126.045
200	27:1	37:1	2126.046
250	20:1	30:1	2126.048
500	12:1	16:1	2126.049

Specify critical orifice when ordering.



Environmental Products Manufacturing

EPM Environmental, Inc.

834 E. Rand Road
Suite #6
Mt. Prospect, IL 60056
Tel.: +01 847.255.4494
Fax: +01 847.255.1959
Email: epmusa@epmenvironmental.com

EPM b.v.

Dalerstraat 32
7843 PE Erm
The Netherlands
Tel.: +31 (0)591-361828
Fax: +31 (0)591-361565
Email: epmnl@wxs.nl

Web Site: www.epmenvironmental.com