

Gas sampling probe HP1





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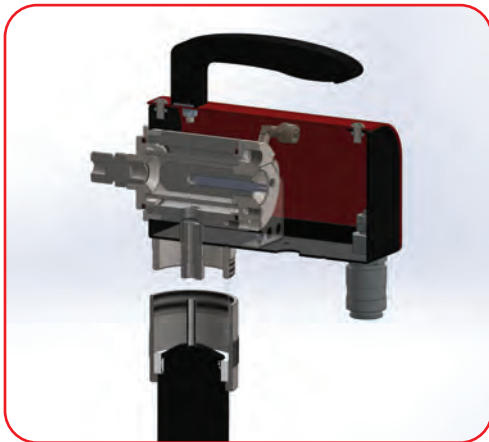
Description

The HPL probe is the evolution of the previous MDG Probe, developed specifically to work in combination with FIO instruments in compliance with EN 12619, dilution samplers or automatic measuring systems. The new HPL is lighter, smaller and even more practical. The HPL probe is available in four versions :

- HP1-1W with one outlet for the heated line
- HP1-1WT same as above but thermoregulated
- HP1-2W with two outlets for two heated lines.
- HP1-2WT same as above but thermoregulated

The 2W version allows to connect two analyzers or two sampling lines simultaneously. The HPL probe has built-in 220V self-regulating elements with a set-point of 180°C +/- 15° hysteresis while the thermoregulated version allows to connect a heated tube which temperatures can be set on the thermoregulation unit.

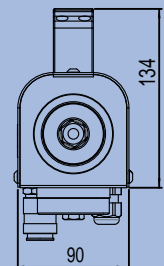
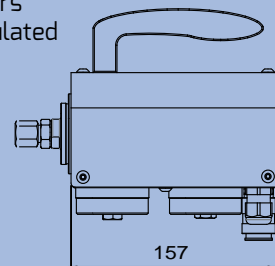
A led indicates when the temperature set-point is reached.



The connections are Swagelok realized in steel with a diameter of 6mm or 8 mm on request, specifically selected to resist to long and continuous heat stress.

Technical characteristics :

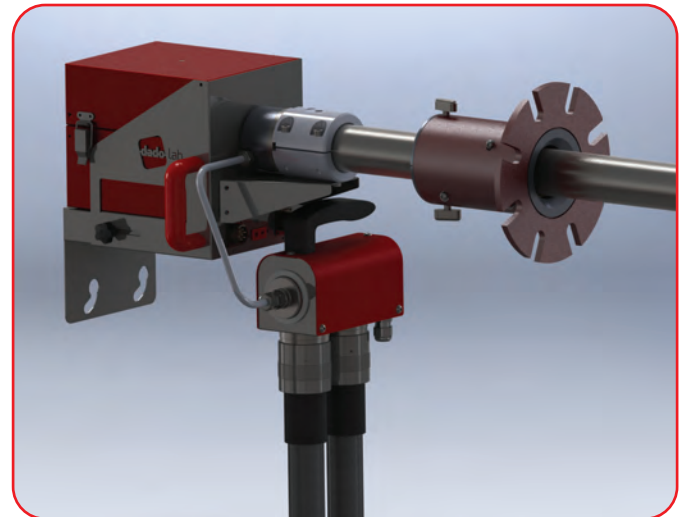
Sampling probe:	Stainless steel. length 30 cm or 70 cm with 6/8 mm diam. (titanium probes are available as option)
Filtering element:	High temperatures with organic binders options: free microfiber or sinter filters
Heating temperature:	Self-regulating at 180° or thermoregulated
Hysteresis:	+/-15°
Heated line connection:	Swagelok diam. 6 mm or 8 mm
Operative conditions:	-20 ÷ 40°C - 95% rH
Stock Conditions:	-20 ÷ 50°C - 95% rH
Power:	220Vac±10% - 50/60Hz supply
Materials:	Stainless steel
Weight:	2,3 kg
Dimensions :	1570 (+300) x 90 x 134 mm



To ease the replacement of the protection filter, the filtering element is placed inside a removable support designed to be quickly changed. Moreover, the small dead volume, decreases the time needed for the sample to reach the detector.

Also zeroing and calibration are now simple operations which can be done without disconnecting the analyzer, thanks to a separated line inlet, placed before the filter element, to which zero and span gas can be directly connected, as requested by the EN 12619 for automatic measuring systems but also for sampling systems since it can be used as a dilution probe just connecting the dilution line of the QB1-D sampler to this inlet connection.

To avoid cold spots between the filter housing and the heated line, a steel cylinder wrap and lock the heated line hose and teflon tube to the probe. The HP1 is supplied in a practical transport case.



The HP1 filter housing can be also connected to the gas sampling line included in HP5 isokinetic heated probe to allow simultaneous sampling of PM and gas phase.

QB1-D The Dilution Sampler :

This is a special version of the QB1 V2x5DC. Same characteristics but realized to be used as a dilution sampler.

Instead of two separated sampling lines, one of them is used to send the dilution flow into the HP1 probe.

Sampled flow from stack emission is diluted 3 or 4 times and this allows to sample VOC avoiding the typical problems related to classic VOC sampling.

Since dilution raises dramatically the dew point of sampled flow, the problem of water condense into the line or in the adsorbing tube is no more an issue, also the temperature is lowered, reducing stripping effects on the tube.

The QB1-D with HP1 Probe is a practical and cost-saving solution.

No more need for multiple tubes in series used as water trap or breakthrough backup.

Since water and temperature are no more an issue, only one large or jumbo tube is enough.

Save time and materials in laboratory when extracting the VOC from the trap, especially if chemical extraction with solvents is used.

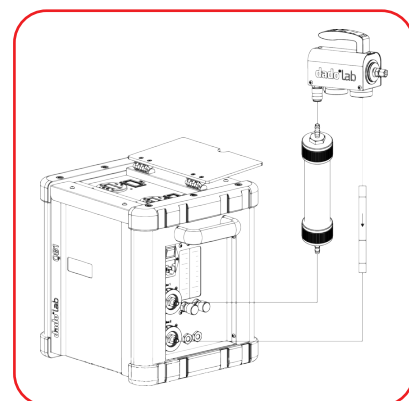
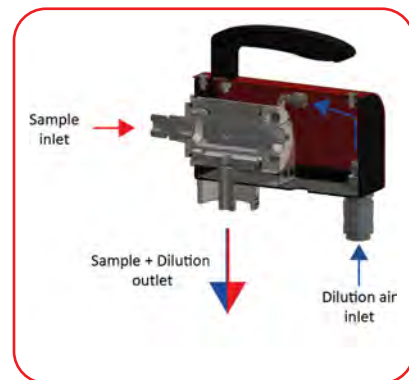
One tube to handle, one extraction, one sample means lower risk to lose compounds. All this lower the laboratory and analytical uncertainty.

QB1-D Standard Supply :

- n° 2 10 l/min pumps 24Vdc
- n°2 dry gas meters
- protection filter
- built-in battery
- Test and Certification report
- Quick connector
- Power cord
- User Manuals

Example of dilution sampling line configuration:

p/n	Description
101 110 1006	QB1-D (220Vac/Batteries) Dilution sampler
101 105 1001	HP1-1W w/ 30 cm sampling tube and case
101 105 1005	Spare AISI316 70cm tube for HP1 probe
101 105 1004	Flange with fixing cone from 2" to 4"
101 105 2011	Sampling/Dilution connection tube
103 110 2001	Tubeholder 10x110 with hosebarbs
101 105 3001	HP1 probe Sintered steel protection filter for VOCs. 1pc



Models, accessories and spare parts



101 105 1001 **HP1-1W 1 way version including :**
 - sampling tube L. 30cm (70cm on request)
 - Self-regulating temperature
 - Carrying case

101 105 1101 **HP1-1WT - Thermoregulated Version**

101 105 1002 **HP1-2W version**
 same as HP1-1W but with two outlets for heated lines

101 105 1102 **HP1-2WT - Thermoregulated Version**



101 105 1003 **Titanium tube L. 70 cm**

101 105 1103 **Heated tube for HP1-xWT version L.=70cm**

101 104 1001 **2-ways thermoregulation unit**
 required to set the operating temperature of the HP1-xWT version

101 105 1104 **Thermoregulation cable L = 5mts**

101 105 1105 **Thermoregulation cable L = 10mt**



101 105 1004 **Flange with fixing cone from 2" to 4"**
 Used to fix the probe to the stack port with 2" port or 4" with flange

101 105 1106 **Flange for 4" stack ports (for heated tube)**

101 105 1006 **Standard protection filters - 10pcs**
 High temperatures standard protection filters (not suitable for VOCs applications)

101 105 3001 **Steel Sintered protection filters - 1 pc**
 High temperatures steel sintered protection filter. Suitable for VOCs determination. Can be regenerated.



101 105 3002 **Microfibers with PTFE binders - 10 pcs**
 Microfibers filters with PTFE binders suitable for VOCs determination



101 101 4002 **Silica Gel/Charcoal Trap**
 - 100 cc
 101 101 4003 - 1 liter