Campionatori a Flusso Costante QB1

dado lab

QB1 Campionatori a Flusso Costante

Description

QB1 is a line of portable samplers designed to be used in all applications that require air sampling and have been designed and built to be the ideal tools for those who work daily in the field.

Simple to use and extremely reliable, the QB1 samplers also integrate protection solutions, such as the internal water collection tank, designed to prevent any damage resulting from the accidental aspiration of dust, silica gel, absorbent solutions or water, which in some cases they could damage the instrument.

Greater protection means greater availability, reduced operating and maintenance costs.

The presence of the automatic pressure loss compensation device guarantees the constancy of the flow set even for long-lasting sampling.

QB1 samplers are equipped with a dry volumetric counter, a precision flow meter, a thermometer for normalizing the aspirated volumes as required by the regulations.

The pneumatic circuit has been designed to ensure the absence of pulsations on the aspirated flow resulting from the use of diaphragm pumps.

The QB1 line is composed of different types of solutions, from the simplest and extremely robust ones, to versions with lithium polymer batteries to the most recent "e" series equipped with electronic management of the sampling and data storage program.

Main Characteristics

- Constant flow sampler with automatic pressure drop compensation
- Great versatility of use in all applications from emissions to industrial hygiene
- Use of “leak free” diaphragm pumps resistant to aggressive compounds
- Protective device against accidental aspiration of liquids and particulates
- Meets and exceeds all the requirements defined by the UNI EN 12919 standard for environmental samplers and for emission sampling methods such as ISO EN 9096, EN 14385 and EN 13649.
- Compact, ergonomic design, exceptional strength and low weight

QB1 - Constant Flow Samplers

The samplers of the QB family are made with quality materials specially chosen to withstand tough applications par excellence.

The AISI 304 stainless steel frame makes it unique in its kind. The non-structural components are made of light and sturdy Peralluman aluminum alloy, powder-coated or anodized.

The absence of sharp corners and the presence of sturdy rubber fenders make it safe to transport and handle.
The realization allows to stack the samplers and to rationalize the storage and transport space.
The internal components have been selected and assembled to guarantee a long service activity and the possibility of being able to operate continuously in any environmental condition.

The sturdy side handles in technopolymer make it easy to handle and allow it to be handled with lifting equipment at height such as ropes and hooks.

All QB1 samplers are equipped with a thermometer for measuring the temperature of the DGM, a vacuum gauge for measuring the pressure drop in the line.

Accurate and reliable

Each device manufactured is subjected to an in-depth test and calibration verification through the use of certified references traceable to international standards.

The results are all indicated on the test report accompanying the instrument.

The use of a flow meter and a volumetric meter meets the requirements of the methods for sampling emissions.

The flow meter reading field is equipped with an expanded scale for a more precise and simple regulation of flows.

All pump models used are guaranteed vacuum tight.

QB1 V1.5 V3.0 and V5.0

They are the basic models of the family characterized by their simplicity of use and rational construction which makes them extremely resistant and quick to use.

The three versions differ in the type of pump installed and therefore in the ideal application.

QB1 V1.5

The V1.5 version is equipped with a 1.5 m3 / h pump which makes it ideal, thanks to its stability at very low flow rates, for withdrawing gaseous species at low flow rates as well as withdrawing powders or asbestos fibers at flow rates around 10-15 l / min.

QB1 V3.0

Equipped with a 3 m3 / h pump, the V3.0 version is the most versatile of the series. This pump can be used both for sampling in the environment of total dust and gas, and for emissions for the sampling of particulates for emissions.

QB1 V5.0

The V5.0 model is equipped with a 5 m3 / h rotary pump which makes it capable of sampling up to 75 l / min with free mouth. Ideal for PMx sampling with EN-LVS heads or for emissions sampling at high flow rates.

QB1 “e” series

Identical to the classic QB1 series from the point of view of the pneumatic circuit and performance characteristics but equipped with electronics for managing the sampling and data processing pre-program, hence the ending “e”.

Electronic controller

For the “e” series, Dado lab has designed and built an electronic controller, as well as the internal firmware, dedicated and based on dedicated industrial components so that the solution is more efficient, stable and robust.

Sensors correction

As for all Dado lab instruments equipped with electronics, also on the "e" series it is possible to insert correction curves on 5 points for:

- DGM volume
- Temperature dgm
- Ambient pressure

The corrections of the sensors can be introduced through special software operating on a Windows PC.

Data logging

The QB1 “e series are internal memory data for sampling reports.
Up to a maximum of 128 reports can be contained in memory.

Data Transfer

Of course it is possible to scroll and view the data on the display but it is also possible to transfer the data directly to your mobile phone via the widespread Dado lab app which allows you to send them later via email or store them in the smartphone memory.

The data stored for each sample are:
- Sample start date and time
- Duration of sampling
- Average ambient pressure
- Medium temperature
- Volume sampled under normal and DGM conditions

Other characteristics

- 2.5 "high contrast OLED display
- Clock / Date in time (dd.mm.yyyy) and hours (hh.mm.ss)
- Sample programming
  Start date and time
  Stopping on a time or volume basis
- Parameters measured and displayed Volume expressed both under normal conditions or in the dgm Resolution 0.1 l

Flow rate expressed both in normal conditions or in the dgm Range 0.2 - 60 l / min (depending on the pump)

DGM temperature Range -20 - +100 ° C Resolution 0.1 ° C

Accuracy 0.5 ° C

Ambient Pressure Range 50 - 115 kPa

Accuracy 0.25% f.s.

QB1 battery operated versions

QB1 V1.5BT and V2.0BT

They are the constant flow samplers equipped with internal lithium polymer batteries.

Li-Po batteries offer many advantages over traditional lead-acid batteries, starting from charging speed and battery life to battery life.
For example, the QB1 V1.5BT can sample for approximately 24 hours with a flow rate of 10 l / min and a pressure drop of 20 kPa, making it ideal for particulate or asbestos sampling in areas with no power supply. Li-Po batteries do not undergo alterations in case of deep discharge, they are much lighter and more compact and recharge faster than other solutions. Two versions are available, the V1.5BT and V2.0BT, which differ in the type of pump installed.In case of transport by air, it is possible to remove the battery and secure it.

The BT versions can also operate directly connected to the mains power supply.

QB1 V2x5DC

The solution for the sampling of gaseous species in the environment and emissions, in particular with branch lines
The V2x5DC version incorporates two low-flow sampling lines in a single instrument.

Each line is equipped with a protection filter, flow meter and volumetric meter.
Two independent programmable timers allow you to manage withdrawals on the two lines.

The high prevalence allows it to be used in withdrawals from emissions with branch lines.

Particularly suitable for use with vials and impinger.

The power supply can take place from the mains or from the built-in batteries.

Techical specifications

QB1 V5.0/e

Pump
5 m3/h rotary vanes
Nominal flowrate75 l/ min

Flow meter scale indication
2 ÷ 30/2 ÷ 30 Nl / min

Total weight
13 Kg

Power
230Vac ± 10% 50 / 60Hz - 150W

QB1 V3.0/e

Pump
twin diaphragm pump
Nominal flowrate 55 l/min

Flow meter scale indication
0.2 ÷ 3.0 / 2 ÷ 30 Nl/min

Total weight
11 Kg

Power
230Vac ± 10% 50/60Hz - 100W

QB1 V1.5/e

Pump
diaphragm pump
Nominal flowrate 32 l/min

Flow meter scale indication
0.2 ÷ 3.0 / 2 ÷ 30 Nl/min

Peso complessivo
9 Kg

Alimentazione e potenza
230Vac ± 10% 50/60Hz - 50W

QB1 V1.5BT

Pump
diaphragm pump
Nominal flowrate 16 l/min

Flow meter scale indication
0.2 ÷ 3.0 / 2 ÷ 30 Nl/min

Total weight
12.5 Kg

Power
230Vac ± 10% 50/60Hz - 50W

Battery
15 Ah Ibuilt-in

QB1 V2.0BT

Pump
diaphragm pump
Nominal flowrate 30 l/min

Flow meter scale indication
0.2 ÷ 3.0 / 2 ÷ 30 Nl/min

Total weight
13 Kg

Power
230Vac ± 10% 50/60Hz - 50W

Battery
15 Ah built-in

QB1 V2x5DC

Pumps
N° 2 diaphragm pumps
Nominal flowrate11 l/min

Flow meter scale indication
0.2 ÷ 5.0 / 0.2 ÷ 5.0 Nl/min

Total weight
13 Kg comprese batterie

Power
230Vac ± 10% 50/60Hz - 50W

Battery
24Vdc 2.3 Ah built-in

Other characteristicc

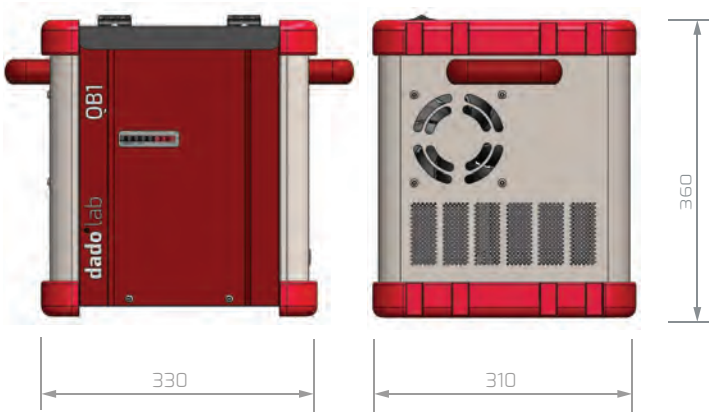
Condition of the sampled gas	Anydrous, max temp 45°C
Gas inlet	filter protection against liquids and particulate matter Quick connectors fittings
Operative conditions	-10 ÷ 40°C 95% UR
Stock conditions	-10 ÷ 50°C 95% UR
Power	230 Vac ±10% 50/60Hz 24 Vdc (per versioni DC)
Materials	Composite AISI steel/aluminum
Size (LxPxA)	330 x 310 x 360 mm
Digital Timer digitale (*)	Program ON/OFF Date/hour Resolution of 1 min Lithium back up battery Automatic restart in case of power failure

Caratteristiche ed accuratezza delle misure

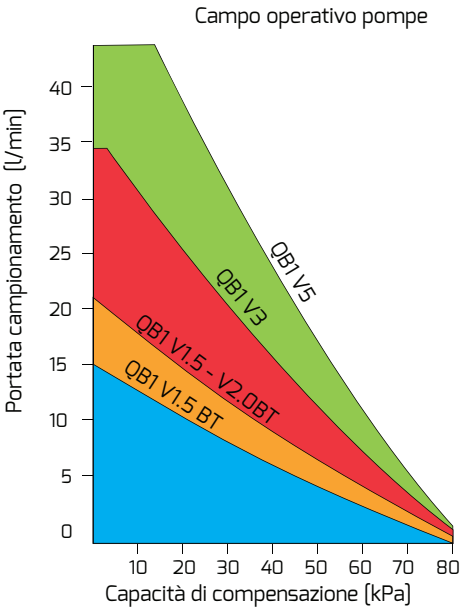
Volume	
Contatore Volumentrico	classe G1.6
Campo di portata	0.016 m³/h 2.5 m³/h
Accuratezza	2% della misura
Risoluzione totalizzatore	0.1 litri
Misuratore di portata	
Flussimetro a galleggiante	
Campo di portata	vedi tabella versioni disponibili
Accuratezza	5% f.s.
Temperatura contatore volumetrico	
Campo	-50 ÷ 70°C
Accuratezza	± 1°C
Risoluzione	0.1°C
Perdita di carico in aspirazione	
Vacuometro	Range 0 ÷ 1 Bar
Accuratezza	± 5%

(*) su richiesta disponibile nella versione con solo interruttore ON/OFF

Dimensioni esterne QB1 [mm]



Campo operativo pompe



Modelli, accessori ed ricambi

101 110 1101 QB1 V1.5 dotazione standard dell'apparecchio
- protezione aspirazione liquidi e solidi
- verbale di collaudo e taratura
- raccordi rapidi per connessione aspirazione
- cavo di alimentazione
- manuale d'uso

101 110 1201 QB1 V1.5e con dotazione standard dell'apparecchio

101 110 1102 QB1 V3.0 con dotazione standard dell'apparecchio

101 110 1202 QB1 V3.0e con dotazione standard dell'apparecchio

101 110 1103 QB1 V5.0 con dotazione standard dell'apparecchio

101 110 1203 QB1 V5.0e on dotazione standard dell'apparecchio

101 110 1013 QB1 V1.5BT dotazione standard dell'apparecchio

101 110 1014 QB1 V2.0BT dotazione standard dell'apparecchio

101 110 1005 QB1 V2x5DC dotazione standard dell'apparecchio
Come sopra ma con pompa da n° 2 pompe 11 l/min 24Vdc

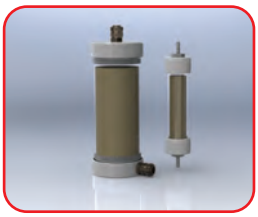
101 110 4004 Supporto per portafiltro 47mm
Asta di supporto in acciaio per portafiltri da 47mm direttamente fissata sul campionatore QB1.

101 110 4005 Portafiltro open 47mm
Portafiltro da 47 mm in alluminio con cartuccia per filtri diametro 47mm

101 110 4006 Cartuccia portafiltro di ricambio
Realizzata in POM ed include la griglia di supporto

101 101 3010 **Filtri protezione ingresso gas**
Confezione da 10 filtri

101 110 4001 **Contatore volumetrico di ricambio**
verbale di collaudo su 2 punti di misura
istruzioni di montaggio e sostituzione



101 101 4002 **Trappola per Gel di Silice**
100cc

101 101 4003 **Trappola per Gel di Silice**
1 litro

300 104 1111 **CF1 - Calibratore di portata digitale 0.4-45 Nl/min con sonda UR**
Calibratore per portata, volume, temperatura ed umidità relativa certificabile come primario. Include adattatore per connessione a Giano/Gemini/1PMx