

TRTECCORA®
POLLUTION CHECK



In compliance with:
EN 14385, CEN/TS 13649, EN 12919,
EN 13284, EN 1911, EN 13211, EN 14790,
ISO 9096, EN 16911.

Continuous Flow Sampler BRAVO DUO



The heart of **BRAVO DUO** consists of two diaphragm pumps resistant to aggressive gases. Flow control is assured by a microprocessor board.

Two independent samplers in the same chassis! This means:

- To carry out double sampling with different methods;
- Less weight during transport;
- Less amount of space required during access to the sampling area.

An external coloured LED stripe, visible from a long distance, indicate the running condition during sampling (ok, warning, alarm, stopped).

BRAVO DUO is capable to perform a constant flow or in isokinetic sampling, setting the flow and correct it manually in case of need.

If you want to transform one sampling line of **DUO** to perform an **AUTOMATIC isokinetic sampling**, connect it to **FLOWTEST**: Bob's your uncle!!!

On-board are installed:

- ② An analog input is available to acquire an external flow measure;
- ② 1 Atmospheric pressure sensor (to refer the sample at standard condition);
- ② 1 Type K thermocouple input (Stack gas temperature measure);



"BRAVO DUO
is the **MULTI-TASK** device
capable to sample stack
gas in isokinetic condition,
in outdoor or working
environments (IAQ)."

Two simultaneous sampling lines:

Line

1

Isokinetic or
Constant flow

Line

2

Constant flow or
low flow derived
sampling



Main Features

- Automatic portable steady flow sampler, double independent sampling lines with microprocessor based control;
- Full flexibility to sample stack gas emission, outdoor air and IAQ;
- High accuracy and stability of the flow measurement;
- Data display and acquisition of:
 - DGM input gas temperature line1/line2;
 - Environmental humidity (Optional);
 - Atmospheric pressure (Optional);
 - Instantaneous flow visualization during sampling line1/line2;
 - Total sampled volume line1/line2;
- Flow range: from 0.15 l/min to max 60 l/min (with series connection of line1 and line2) pump type dependent;
- IP65 membrane keypad/color display user interface;
- Data storage of all parameters with easy recall by keypad;
- Data export via USB port;
- Control output for optional sequential sampling system for total suspended particles and sorbent tubes;
- Optional internal high capacity battery;
- Available power supply: 230 VAC 50/60 Hz | 110 VAC 50/60 Hz.





BRAVO DUO



Color display and membrane keyboard

Dry Gas Meter Line 2

Retractable Handle

External Display

Safety Edge Protections

Dry Gas Meter Line 2

Fan

Membrane Pump

New
Keyboard





BRAVO DUO

Technical Features

Bravo DUO Model L

The sampler control two sampling lines simultaneously:
(Other flow on request)

Line 1 max 35 l/Min, Line 2 max 5 l/min (with no obstructions).

It is also possible, connecting line 1 and line 2 in PARALLEL, to get a single line with 40 l/min of total sampling flow (max flow with no restrictions).



Pump type	Diaphragm double head corrosion proof
Max flow* (with no restrictions)	Linea 1: 35 l/min • Linea 2: 5 l/min
Flow ranges	Linea 1: 1-35 l/min • Linea 2: 0.2-5 l/min
Dry gas meter range	0.016 - 2.5 m ³ /h
Flow measure sensor	Encoder on DGM
Gas temp. sensor range	-50÷70 °C Acc. 1 °C Res. 0.1 °C
Enviro. humidity sensor range	10÷ 99 % UR (Optional)

*Other flow on request (as for example n° 2 lines 0.2-25 l/min)

Absolute press. sensor range	0-103 kPa, Acc. ± 0.1 kPa, Res. 0.01 kPa
Diff. press. sensor range (pitot)	0-2500 Pa, Acc. > 1%, Res. 0.1 Pa
Sampler control	µprocessor board
User interface	IP65 keypad/color display
Weight	11 Kg
Dimensions	200 x 315 x 534 mm (7.87 x 12.40 x 21.02 inch)
Power Supply	230 VAC 50-60Hz Internal Battery (Optional)
Power Consumption	650W

Bravo DUO Model H

The sampler control two sampling lines simultaneously:

Line 1 max 35 l/Min, Line 2 max 35 l/min.

It is also possible, connecting line 1 and line 2 in PARALLEL, to get a single line with 70 l/min of total sampling flow (max flow with no restrictions).



Pump type	Diaphragm double head corrosion proof
Max flow (with no restrictions)	Linea 1: 35 l/min • Linea 2: 35 l/min
Flow ranges	Linea 1: 1-35 l/min • Linea 2: 1-35 l/min
Dry gas meter range	0.016 - 2.5 m ³ /h
Flow measure sensor	Encoder on DGM
Gas temp. sensor range	-50÷70 °C Acc. 1 °C Res. 0.1 °C
Enviro. humidity sensor range	10÷ 99 % UR (Optional)
Absolute press. sensor range	0-103 kPa, Acc. ± 0.1 kPa, Res. 0.01 kPa
Diff. press. sensor range (pitot)	0-2500 Pa, Acc. > 1%, Res. 0.1 Pa
Sampler control	µprocessore board



User Interface	IP65 keypad / color display
Weight	14 Kg
Dimensions	200 x 315 x 534 mm (7.87 x 12.40 x 21.02 inch)
Power supply	230 VAC / Internal battery (Optional)
Power consumption	900W

