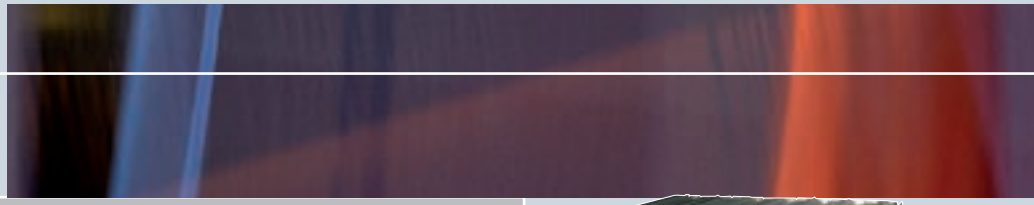
# FloWEB

Flow
Computer


Pietro Fiorentini®



# FloWEB


> Flow Computer

## Introduction

**FloWEB** flow computer acquires primary data directly from flowmeters, temperature sensors, pressure and differential pressure transmitters, density and gas analyzers to monitor and control the local process plant associated with the flow measurement system. Compact, highly reliable and easy to set up and use, the **FloWEB** has been specifically designed to cope with the demanding needs of the gas and oil industry.

**Simple to use**
The simple to use menu-driven keyboard provides complete access to all variables and simplify configuration.

**High flexibility flow computer**
The **FloWEB** integrates at the same time a turbine, an orifice and an ultrasonic flow computer.

**Integrated WEB server** The web user interface is embedded directly in the **FloWEB** and allows the user to "browse", via the Internet/Intranet, to retrieve real-time metering data and status report, to check alarms, to perform diagnostics and routine maintenance instantly and an easy software upgrade operation.

**High capacity Memory Card for reports and logs data storage**
The standard, high capacity, removable memory card provides a "virtual printer" feature and complete access to the metering station history.

**Communications**
The **FloWEB** flow computer offers the user unprecedented communications flexibility. The FloWEB flow computer interfaces to any other vendors RTU's, PLC's, DCS's and 'smart' instruments.

**Smart transmitters**
Intelligent instruments from many vendors are easily integrated using the Smart integrated port. Hart protocol is currently available Together with several fieldbus versions.

**Multi-stream capability** The **FloWEB** flow computer can perform multi-stream metering applications with different flow meter types.

**General standards supported**
AGA 3, 5, 7, 8 and NX19
ISO 5167, 6976 and 12213-3
API 1101, 2530,2534,2540

The **FloWEB** flow computer may be configured in the three following gas applications:

- **Gas Turbine Meter**
- **Gas Orifice Meter**
- **Gas Ultrasonic Meter**

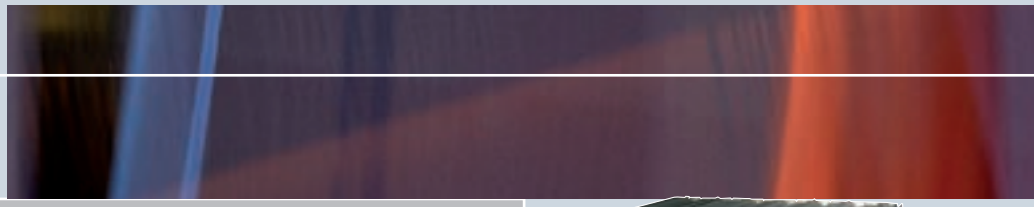

FloWEB

The **FloWEB** flow computer may be configured in the four following liquid applications:

- **Liquid Turbine Meter**
- **Liquid Positive Displacement Meter**
- **Liquid Coriolis Meter**
- **Liquid Orifice Meter**

## Designed With Your Needs In Mind

- Compact Design
- Simple To Use
- High Flexibility
- Integrated WEB Server
- High Capacity Memory Card
- Smart Connections
- Multi Stream Capability



# FloWEB


> Flow Computer

## Gas Turbine

**FloWEB** gas turbine configured flow computer offers the following features :

### Inputs

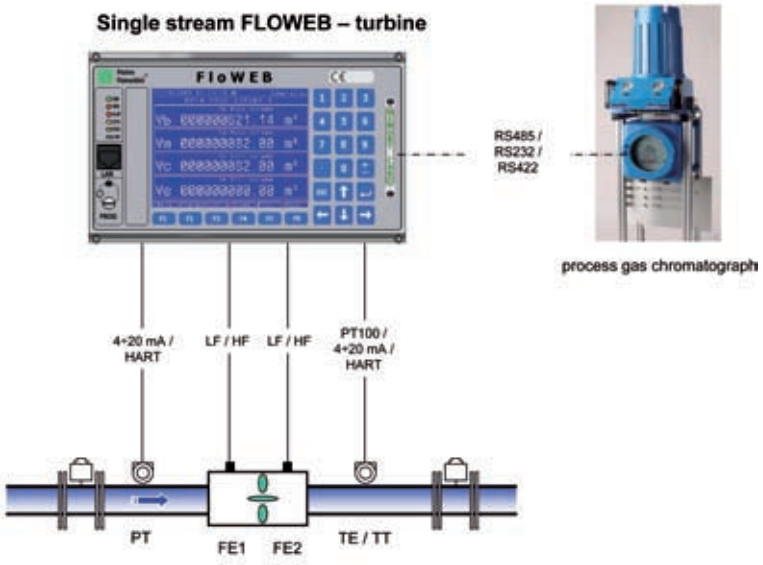
- Pressure and temperature inputs as either 4 - 20mA, 1 – 5V or Smart/Hart digital protocol.
- Asynchronous data link to gas chromatographs.

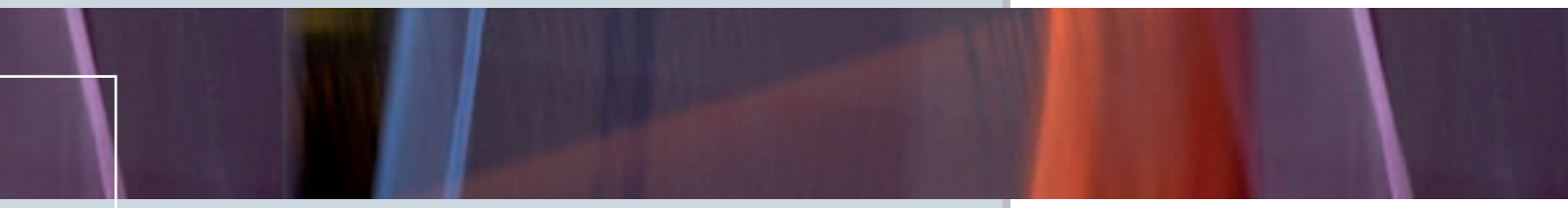
### Features

- Multiple 10 points turbine linearization curve, with curve fitting capability between points.
- Capability to handle single or dual pulse turbine pulses, with detection of blade failure.
- Multi-stream capability for up to two gas streams.

### Calculations

- Gas volume flow calculations using AGA7 algorithms.
- Line and base density derived from densitometer source
- Compressibility calculated according to AGA 8, AGA NX 19, ISO 12213-3 or MGERG.
- Calorific value directly from gas chromatograph source or from calculation using ISO 6976.





## Gas Orifice

**FloWEB** gas orifice configured flow computer offers the following features :

### Inputs

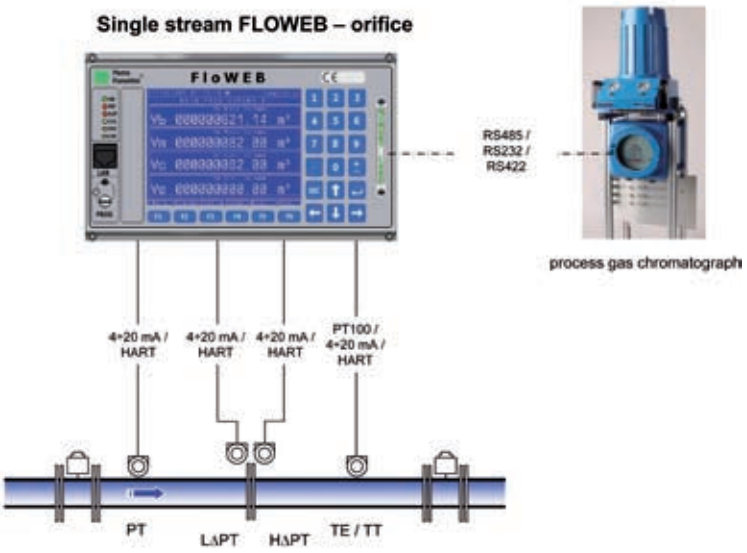
- Up to 3 differential pressure, pressure and temperature inputs as either 4 - 20mA, 1 – 5V or Smart/Hart digital protocol.
- Asynchronous data link to gas chromatographs.
- Supports line density or base density transducers.

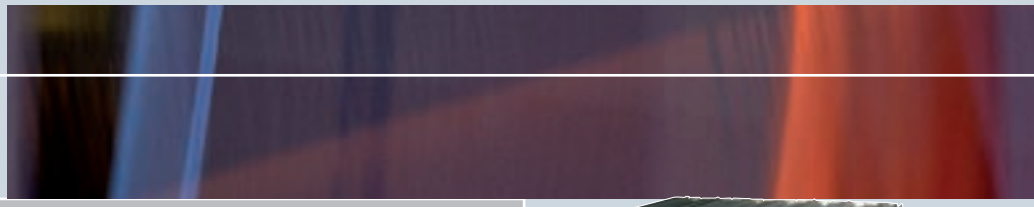
### Features

- Auto-ranging on multiple (up to three) differential pressure configurations.
- Multi-stream capability for up to two gas streams.

### Calculations

- Gas mass flow or corrected volume calculations according to ISO5167 or AGA 3 standards.
- Line and base density derived from densitometer source
- Compressibility calculated according to AGA 8, AGA NX 19, ISO 12213-3 or MGERG.
- Calorific value directly from gas chromatograph source or from calculation using ISO 6976.





# FloWEB


> Flow Computer

## Gas Ultrasonic

**FloWEB** gas ultrasonic configured flow computer offers the following features:

### Inputs

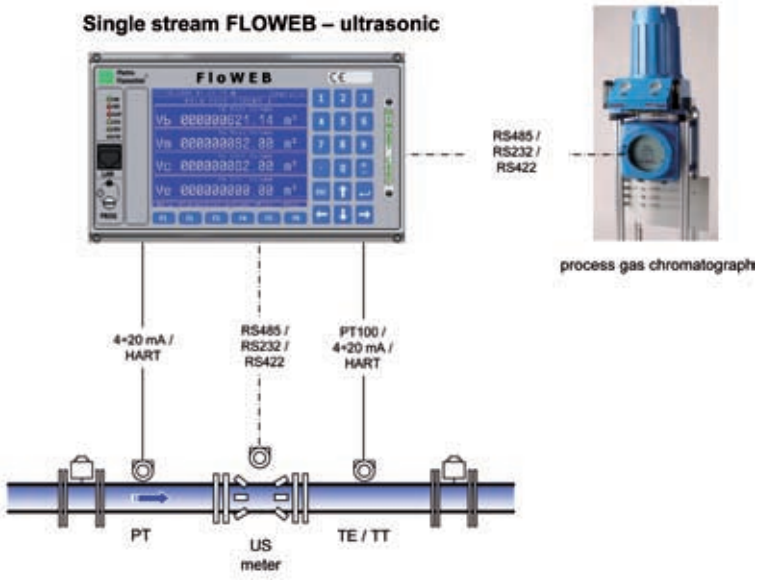
- Pressure and temperature inputs as either 4 - 20mA, 1 – 5V or Smart/Hart digital protocol.
- Asynchronous data link to gas ultrasonic meter.
- Asynchronous data link to gas chromatographs.

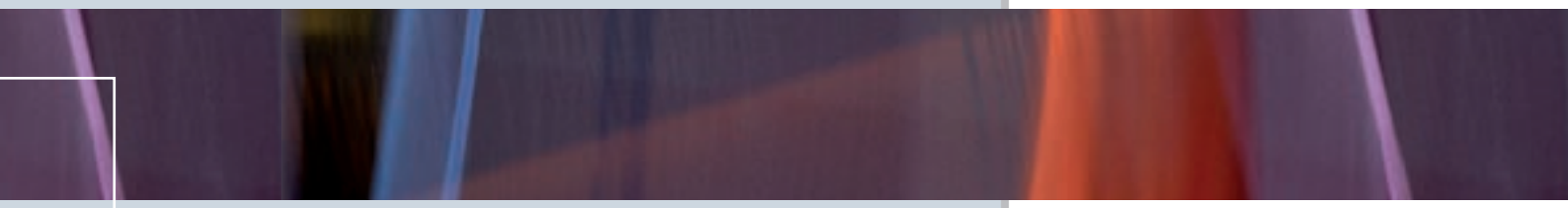
### Features

- Multi-stream capability for up to two gas streams.

### Calculations

- Gas mass flow or corrected volume calculations according to AGA 9 standards.
- Line and base density derived from densitometer source
- Compressibility calculated according to AGA 8, AGA NX 19, ISO 12213-3 or MGERG.
- Calorific value directly from gas chromatograph source or from calculation using ISO 6976.





## Specification

| MODEL | 3480410 | 3480411 | 3480412 | 3480413 |
|---|---|---|---|---|
| Mounting | Panel | Panel | Panel | Panel |
| Connections | terminal screw-type | terminal screw-type | terminal screw-type | terminal screw-type |
| **INPUTS** | | | | |
| Flowmeter (single or dual pulse) | 1 | 1 | 1+1 | 1+1 |
| Density (time period) | 1 | 1 | 1+1 | 1+1 |
| Analog (4-20mA or 1-5V) | 5 | 5 | 5+5 | 5+5 |
| Ultrasonic flow meter | 1 | 1 | 1+1 | 1+1 |
| Gas chromatograph | 1 | 1 | 1 | 1 |
| RTD/PT100 | 1 | 1 | 1+1 | 1+1 |
| HART loops | 1 | 1 | 1+1 | 1+1 |
| Digital (status) | 3 | 3 | 3 | 3 |
| **OUTPUTS** | | | | |
| Analog (4-20mA) | - | 6 | - | 6 |
| Digital (relay) | 2 | 2 | 2 | 2 |
| Pulsed (open collector) | 8 | 8 | 8 | 8 |
| **COMMUNICATIONS** | | | | |
| RS232/485 | 4 | 4 | 4+1 | 4+1 |
| Ethernet | 1 | 1 | 1 | 1 |
| CAN bus | 1 | 1 | 1 | 1 |
| **POWER REQUIREMENT** | | | | |
| V dc | 18-36V | | | |
| Power | 30W | | | |
| **ENVIRONMENT** | | | | |
| Operating temperature | -10°C - 50°C | | | |
| Storage temperature | -20°C - 60°C | | | |
| **ENCLOSURE** | | | | |
| Environmental rating | IP20 | | | |
| Height, mm (in) | 128,4 (5,05) | | | |
| Width, mm (in) | 213 (8,4) | | | |
| Depth, mm (in) | 232 (9,14) | | | |
| Panel cutout h x w, mm (in) | 115 x 210 (4,53 x 8,26) | | | |
| Weight approx., Kg (lb) | 2 (4,4) | | | |
| **REGULATIONS** | | | | |
| Metrological | NMI: EN 12405-1: 2005 | | | |
| Electrical safety | EN 60950: 2002 | | | |
| Electrical emissions | EN 61000-6-3: 2002 (Light industrial) | | | |
| Electrical immunity | EN 61000-6-2: 2002 (industrial) | | | |

**OPTIONS:**

- 3480430 RACK 19" 3HE for two FloWEBs mounting
- 3480431 19" PANEL 6HE with one 24 columns printer
- 3480432 19" PANEL 6HE with two 24 columns printer



Pietro Fiorentini S.p.A.
via Pasteur,1
I-28060 S.Pietro Mosezzo (No)
Italy

Tel. +39 0321 538.111
Fax. +39 0321 538.150

tech.info: tecelctr@fiorentini.com
com. info: appelectr@fiorentini.com
www.fiorentini.com

via Rosellini 1
I-20124 Milano
Italy

Tel. +39 02 696.14.21
Fax. +39 02 688.04.57

CT-s510-E January 2007