Mix-itometer System
ITS has a range of MIX-ITOMETER packages that are tailored to the demands of your mixing applications.

Whether your mixing is in vessels, or inline, MIX-ITOMETER will enable users to better understand, optimize, and control mixing applications. MIX-ITOMETER sensors use cutting-edge electrical tomography technology, taking the formed of flanged sections for pipes, or dip probes for vessels, these sensors interface directly with your process and measure the electrical properties of the whole volume as they change in real time.

From this data, MIX-ITOMETER software is able to visualize your process in real-time enabling you to determine blend uniformity, track the formation of mixing caverns, and determine end-points.

MIX-ITOMETER’s versatility means that this powerful tool is used across a range of industries: from chemical and pharmaceutical production, to food and drink manufacturing. What’s more, the unit can be supplied with an ATEX certified module so the sensor can be placed in hazardous environments (certified to EEx ia IIC T6).

Poor mixing costs millions - don’t leave it to chance.

Figure 1: MIX-ITOMETER sensors are available as probes for tanks, or as inline spool pieces for pipelines, as pictured above.

Figure 2: Monitor homogeneity: live non-intrusively, and in 3D
HOW IT WORKS

Our sensors comprise a set of electrodes distributed around the periphery of the volume. These electrodes use a tiny AC current to measure the electrical properties of the volume, and these electrical properties are processed to produce a 'tomogram'. Our software uses these tomograms to calculate and output a number of useful process control parameters, such as %composition, homogeneity, gas holdup, mixing time, reaction kinetics, degree of separation, solids concentration profiles, and more.

The MIX-ITOMETER sensors can be built for pipe/vessel diameters from millimetres to metres in scale. This makes MIX-ITOMETER ideal for R&D, Pilot scales, and Production scale installations.

KEY BENEFITS

- Scalability: can be installed in R&D to Pilot to Production
- Robust sensors: no moving parts and few materials of construction
- Real-time process data: no need to stop and sample
- Volumetric imaging: significantly better than point measurements
- Works with almost all materials: solid/liquid, liquid/liquid, gas/liquid

PACKAGE INCLUDES

- A sensor designed to meet the requirements of your application (available as either a spool piece or dip probe)
- Data acquisition system (see below left)
- User-friendly tomography software with measurable outputs (see below)
- Optional technical support from ITS’s team of specialist engineers

Figure 3: p2+ data acquisition system
Figure 4: MIX-ITOMETER software
**Mix-itometer: System Specifications**

ITS tomography systems are comprised of a sensor that interfaces with your process, instrumentation, software, and technical support from our dedicated team of engineers.

### SOFTWARE

![Software Image]

### SENSOR

- **Vessel**
- **Pipe**
- **Probe**

### INSTRUMENTATION

- **v5r ERT instrument**
- **p2+ ERT instrument**
- **m3c ECT instrument**

### TECHNICAL SUPPORT

For a detailed technical specification of this system, or to learn more about how it can enhance your processes, please [email us](mailto:enquiry@itoms.com), [enquire online](https://www.itoms.com), or call +44 (0) 161 832 9297.