

OIL & GAS custody transfer
metering and control **solutions**



iSystems | **delivering results**



 **Competent.**

Over 15 years experience delivering results in custody transfer metering systems

iSystems was founded in 2004 by a group of engineers with extensive experience in the development of custody transfer metering and process control systems for natural gas, industrial gases and oil products.

With this experience, iSystems offers a wide range of solutions, from consultancy to supplying turnkey systems, from relatively simple standard units to border metering stations and even calibration rigs.

The Problem with System Integrators...

Many system integrators and metering consultants are either “captive” or biased, being part of large companies selling the separate instruments and equipment used in metering systems, or having alliances with such companies. They are often limited to using their own or their partners’ products to provide an overall solution. In many cases, this is not in the client’s best interest.

Our solution is based on the customer’s needs

iSystems is a fully independent system integrator for custody transfer metering and control systems. Our partners have all been selected on their technical merits, and we don’t have any financial relationship with vendors or other conflicts of interest that would prevent us from providing optimized solutions for our customers.

Our solutions are based on the needs of our customers. By understanding the issues involved in the design you have in mind for your system, we are able to deliver solutions that really hit the target.

We are located in Antwerp, one of the leading cities in the Flemish part of Belgium.

Known worldwide as a center of the diamond industry, Antwerp is also Europe’s second largest seaport for international shipping freight and the seventh largest in the world. It’s Europe’s largest and most diversified petrochemical center, with no less than seven of the world’s top chemical companies having one or more production sites in the Antwerp petrochemical cluster. The city has excellent cultural and technical resources, and the vibrancy that comes from strong cultural links to many other parts of the world.

And of course, we’re only a few kilometers away from Brussels, the heart of the European Union and within 2 hours by high-speed train of major cities such as London, Paris and Amsterdam.



Experience Counts

The acceptance over the past few years of new electronic equipment for flow metering and control of oil and gas has made systems more reliable and more accurate while requiring less maintenance. The only downside is that engineers and operators need to be more highly trained than ever before. Countless factors have been taken into consideration when designing a Custody Transfer Metering system, requiring engineers in this field to be multi-disciplinary specialists with that extra and invaluable edge: experience...



Problem solvers.

Sales or Custody Transfer Metering forms the basis of contractual arrangements between sellers and buyers, producers and transport pipeline owners, governments of neighbouring countries. It affects everyone's bottom line.

Custody Transfer Metering

real, sustainable performance

The Custody Transfer Metering system at the delivery point where oil or gas is changing hands forms the basis for invoicing. Every cubic meter of product has to be accurately accounted for, its delivery conditions (such as pressure, temperature, contaminants and energy value) closely monitored and recorded.

Metering systems in the oil & gas industry have rapidly evolved in terms of sophistication, accuracy and reliability; countless factors have to be taken into account in the design of a metering system, requiring multi-disciplinary specialists with very specific experience and knowledge.

iSystems specialize in the design of custody transfer metering systems for oil, natural gas and industrial gases, using various flow measurement techniques available on the market today.

We have experience in designing systems with ultrasonic, turbine, positive displacement, coriolis, orifice and vortex meters, if required combined with compact provers or loop provers in the case of liquids measurement.

We can deliver flow metering systems for upstream and downstream applications, onshore or offshore, metering stations for pipelines, power plants or heavy industry, oil refineries, ship loading and unloading and much more.

Metering systems can be supplied complete with flow computers, Supervisory & HMI systems and PLC or DCS based control systems, packaged analyzer systems and any other ancillaries that may be required.



Computer & Control Systems

Flow computers, Supervisory & HMI systems and other metering system automation form an integral part of our Metering Solutions.

Custody Transfer Metering systems are generally supplied complete with microprocessor-based flow computers which form the actual "cash register" of the metering system. iSystems has experience with the most widely used brands and latest technologies.

In today's world, all but the simplest systems require at least some degree of electronics for logic control and monitoring. We design, build, test and install these Station Control Systems, usually as an integral part of a turnkey metering system, but also as separate systems to complement existing installations.

These systems can be limited to simple controls and operations performed by the station flow computers, but they may also include extensive PLC or DCS-based process control and PC-based Supervisory & HMI systems for station control, monitoring, automation of verification and calibration, and communication with the main plant control system.

Such systems are designed in-house by iSystems in close partnership with specialist companies supplying the tailor-made software to suit the customer's specific application requirements.

Innovative Designs

Building skids to precise specifications using the highest quality components sometimes isn't enough. Space constraints, extreme process conditions, specific operation and maintenance requirements or other factors often call for designs that are different from standard, straightforward metering runs.

But we are at our best when presented with a challenge.



Flexible.



Custody Transfer Metering doesn't stop at just flow metering. Many systems will need product filtering, preheating, flow or pressure control, quality analysis and other ancillaries. iSystems provides additional peace of mind by delivering the complete package with single-point responsibility.

Pressure Control Stations and Analyzer Packages

single-point responsibility



Pressure Control Stations

Natural gas is usually highly pressurized as it travels through transport pipelines. But once it reaches the consumers, it needs to be brought up to the contractual specifications for delivery. This often means that solids and liquids have to be filtered out, the pressure has to be reduced, and the gas may need to be preheated to counteract the cooling effect of the pressure reduction. And last but not least, the downstream consumers need to be protected from being exposed to the full transport pipeline pressure.

iSystems designs and supplies complete city gate stations, fuel gas stations for heavy industry, refineries and power plants, incorporating pressure and flow control as well as other ancillaries such as slug catchers, KO drums, filtering systems, gas preheating systems, and station ESD and safety systems.



Packaged Analyzer Systems

Pre-assembled analyzer systems provide customers with everything they need in a single package. Whether it be for gas production, custody transfer metering, or gas delivery to a major consumer; the quality of natural gas is usually an important factor in gas sales contracts, and therefore it needs to be closely and accurately monitored.

iSystems engineers gas analyzer systems ranging from just one single gas chromatograph up to a fully developed analysis system that may include moisture measurement, hydrocarbon dewpoint measurement, H₂S and sulphur content analysis, O₂ content, specific gravity or density measurement, and much more.



Our analyzer packages can be supplied complete with sample takeoff and conditioning, fully assembled, in prefabricated analyzer shelters with explosion-proof HVAC, fire and gas detection and extinguishing systems, ready for installation on site with only a minimum of field connections to be made.

Project References

Since 2004, iSystems have completed numerous projects for a variety of customers. Visit our website www.isystems.be for a updated list of reference projects, covering our areas of expertise and with varying scopes of work and supply.

Manufacturing

The main construction activities for our packaged systems are carried out in workshops in Belgium and The Netherlands. These workshops have all facilities for the fabrication of control panels, analyzer systems, mechanical, piping and steelwork fabrication and system assembly, with specialized companies for professional blast cleaning and coating nearby. And of course, the necessary experienced, trained and certified personnel to get the job done.

For some projects where the requirements for Local Content or the logistics demand it, we team up with experienced contractors in the country of destination to handle part of the manufacturing and assembly. Such contractors are carefully selected to meet all the requirements of the iSystems quality management system.

Engineers.



iSystems provides you with services for engineering, procurement, construction and project management.



For projects within our field of expertise, we offer third-party engineering and consultancy based on our specific skills and experience. Contractors, manufacturers and oil or gas producing companies can use our extensive knowledge of metering and control systems to design specific solutions for their applications, or assess their existing installations.

Project Services

profit from our know-how



Proposals, Technical and Feasibility Studies

Detailed studies empower clients to make informed decisions on technical and economical aspects of upcoming projects. Such studies can include;

- Available technologies with comparative evaluation
- Preliminary technical evaluation
- Product quality
- Utility and energy consumption
- Sized equipment lists
- Preliminary plot area and equipment alignment
- Economic evaluation and estimated costs

Studies can be provided for a single case all the way to a comparative analysis based on different options, locations and capacities. If a revamp case is evaluated, the engineering documentation includes information related to the reuse of existing equipment, a list of required new equipment, and comparative data related to the performance of the original and revamped installations.

During a proposal or feasibility study, iSystems work closely with the client every step of the way to ensure that goals are met. Site visits prior to the start of engineering work as well as presentations and supporting activities can be provided.

Basic and Detailed Engineering Packages

Our basic and detailed engineering packages are designed so that all important information can efficiently and successfully be transferred to customers and fabricators. The information is structured so that an experienced EPC contractor can easily execute the works. A package covers the entire technology know-how for constructing and operating the system.

Our engineering packages are built on company know-how, thoughtful analysis and research, and monitoring of operational technologies. The package can include detailed process flow diagrams and P&ID's, equipment specifications and datasheets, descriptions of process control, material lists and construction drawings, all depending on the level of detail required by the client.



Featured Services

iSystems provides a wide range of engineering services within the oil & gas metering and control field of expertise, including;

Proposals, Technical and Feasibility Studies, Basic and Detailed Engineering Packages, Front-end engineering design (FEED), customer support in various stages of project implementation, assistance with HAZOP studies, EPC management, assistance at site during commissioning, assessment and upgrading of existing facilities.

CERTIFICATE

ISO 9001:2008



hereby certifies that the company

iSYSTEMS NV - Belgium

business field:

Sales, Design and Development, Fabrication, Installation and Commissioning, Training and Maintenance, Distribution of Gas and Liquids metering and Control Systems, and related Products

location:

Vrijwilligerslei 1 * B-2930 Brasschaat

has successfully implemented the above mentioned quality management system according to the standard (11/2008) and applies it effectively. The conformity was inspected during the certification audit documented in audit report no. A09101280. This certificate is only valid in connection with the successful performance of the surveillance audits.

This certificate is valid from: 11.11.2009
This certificate is valid until: 10.11.2012
Last audit day: 23.10.2009

Date of the first certification: 11.11.2009
Certificate registration no.: 81109722



DEKRA Certification GmbH
Stuttgart, 11.11.2009



QMS-TGA-ZM-05-91-00



DEKRA Certification



DEKRA Certification



DEKRA Certification



Quality and HSE

improvement is our mission



iSystems has a Quality Assurance System to make sure that our products and services are in line with the customer's expectations and in accordance with the ruling standards and codes. Quality is guaranteed by checks and tests at various levels of design and manufacturing, and by keeping precise project records.

iSystems provides products and services in the oil and gas sector that need to be compliant with client specifications, national and international standards and codes, and other applicable guidelines, legislation, statutory requirements or contractual requirements.

In order to safeguard the quality of our work and to deliver our services as agreed, iSystems has a ISO 9001-compliant quality management system in place. The quality system was developed from the experience gained in our field of work, and we have been certified to ISO 9001 since 2006. This certification is proof of the commitment of iSystems to high quality products and services.

iSystems will continue to deliver high quality products and services by thorough planning and tight control of our work process.

Health, Safety and Environment Policy

iSystems is committed to safeguarding human health and safety and conserving the environment.

This commitment is achieved by ensuring that HSE aspects are addressed in the design, construction, operation and maintenance of facilities, and complying with all applicable HSE laws and regulations or applying responsible standards where laws and regulations do not exist. Hazards and risks are identified and assessed to reduce risk to levels as low as practiceable, energy and natural resources are used efficiently and waste and emissions are minimized.

All levels of management, employees and contractor's personnel are expected to participate in and comply with HSE initiatives and show individual responsibility for their own safety, the safety of others and protection of the environment.

At the end of the day, our job is to make it all Work.

iSystems have designed and supplied many engineered solutions over the past few years. These solutions are not out-of-the-box; the standard products on the market will only meet the customer's demands in part. The remaining part needs our design, development and configuration to tailor the system to the exact functional and quality requirements.

Get In Touch

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Engineering and Consultancy

Custody Transfer Metering Systems

Pressure Control Stations

Metering and Pressure control station ancillaries

Station Control Systems

Packaged Analyzer Systems

Worldwide representatives

iSystems has representatives, agents and partners at various locations around the globe.

Visit our website www.iSystems.be for details, or contact our head office in Belgium.

