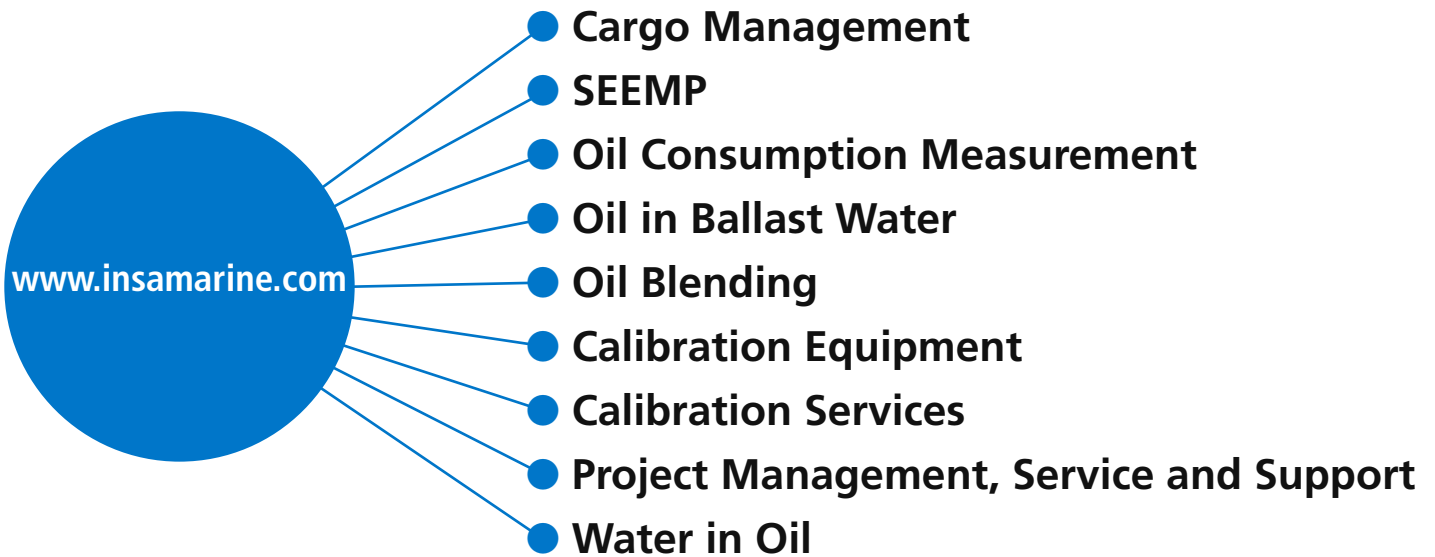


# Marine Solutions



# Oil Blending

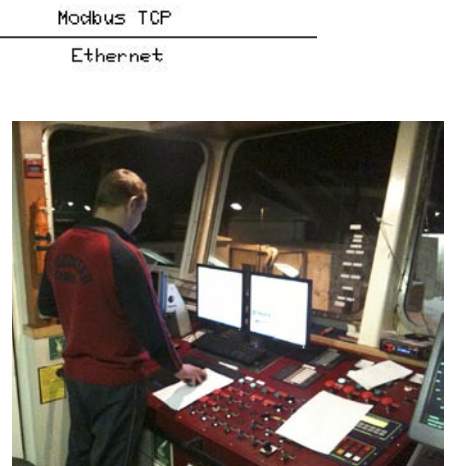
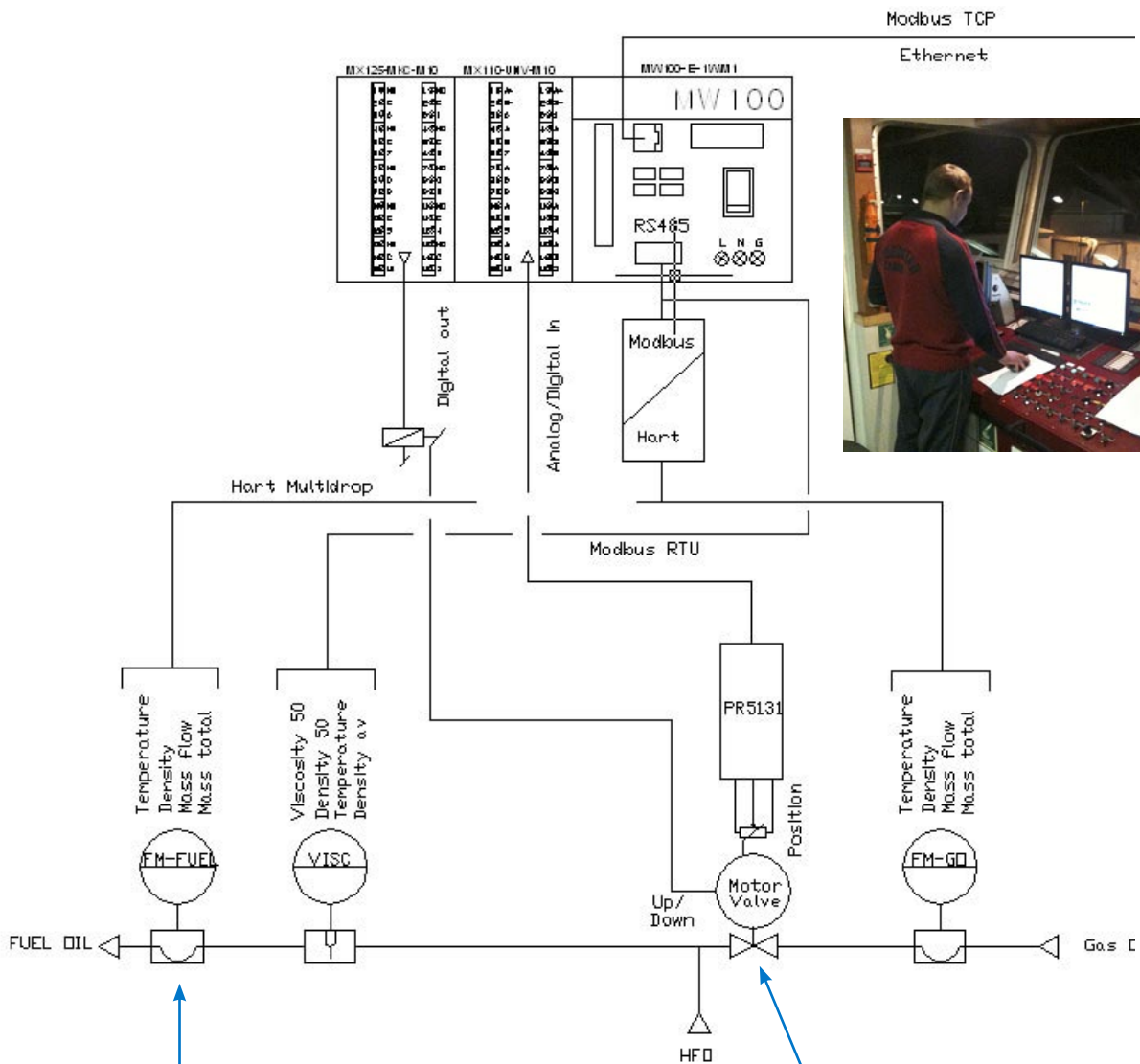
## Viscosity 50 • Density 15

Oil Blending is a unique concept prepared for MID approvals. Oil Blend gives you the possibility to blend your oil as the bunkering takes place, on the basis of the quality parameters:

### VISCOSITY 50

### DENSITY 15

Oil Blending gives you the most accurate mass flow measurement possible in the world, by using the Coriolis massflowmeters from Yokogawa.



# SEEMP

## Speed Energy Efficiency Management Plan

### Real time Oil Consumption


**Stina Kosan Oil Consumption**

	Main Engine	Generator	Total	
Consumption	1241	0.824	2.065	m3/hour
Total trip counter	32.41	22.44	1221	m3

Reset Trip    Reset Trip    Reset Trip

**Other**

Temperature	121	°C
Viscosity	8.762	mPa.s
Viscosity alarm	12	mPa.s
Density at T	0.914	kg/l
Density at 15°C	0.987	kg/l
Power G1	87.1	KWatt
Power G2	45.7	KWatt
Power G3	98.1	KWatt



### Speed Test

**Stina Kosan Speed Test**

	RPM	Average Fuel Consumption m3/h	Speed knots	Trim	Fuel Efficiency g/kWh
Test 1	0	0	0	0	0
Test 2	0	0	0	0	0
Test 3	0	0	0	0	0
Test 4	0	0	0	0	0
Test 5	0	0	0	0	0
Test 6	0	0	0	0	0
Test 7	0	0	0	0	0
Test 8	0	0	0	0	0

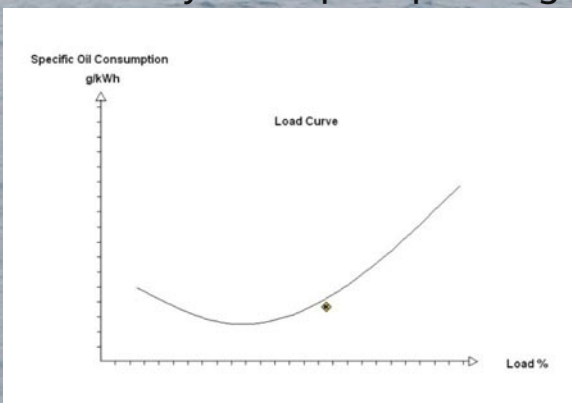
Clear Data    Export to Excel

Before start - press the Clear Data button. Maintain a constant RPM. Press test button to start calculation of average fuel consumption over a period of 1 minute. When timer has expired all values change from Zero to average values



Know in real time how cost effective your ship is operating

Get the real Oil Consumption report



**Stina Kosan Consumption Report**

Stina Kosan IMO no. 123412      Date: 2010-11-23  
 Voyage: Antwerp - Houston  
 From: 2010-11-05 at 10:34 AM      To: \_\_\_\_\_

Voyage Start: \_\_\_\_\_      Voyage Consumption: 352.5      Voyage End: \_\_\_\_\_

Day	Date	Main engine	Generators	Total	Comments
1	2010-11-01	17.4	2.4	19.8	
2	2010-11-02	19.2	2.4	21.6	
3	2010-11-03	17.1	3.2	20.3	
4	2010-11-04	20.1	2.1	22.2	
5	2010-11-05	12.4	1.9	14.3	
6	2010-11-06	17.4	2.4	19.8	
7	2010-11-07	19.2	2.4	21.6	
8	2010-11-08	17.1	3.2	20.3	
9	2010-11-09	20.1	2.1	22.2	
10	2010-11-10	12.4	1.9	14.3	
11	2010-11-11	19.2	4.1	23.3	
12	2010-11-12	21.4	3.6	25.0	
13	2010-11-13	24.0	3.6	27.6	
14	2010-11-14	20.1	2.1	22.2	
15	2010-11-15	16.1	3.3	19.4	
16	2010-11-16	17.3	3.2	20.5	
17	2010-11-17	17.4	2.4	19.8	
18	2010-11-18	19.2	2.4	21.6	
19	2010-11-19	17.1	3.2	20.3	
20	2010-11-20	20.1	2.1	22.2	
21	2010-11-21	12.4	1.9	14.3	
22	2010-11-22	17.4	2.4	19.8	
23	2010-11-23	15.1	5.3	19.4	
24	2010-11-24	17.4	3.2	20.6	
25	2010-11-25	17.4	2.4	19.8	
26	2010-11-26	14.2	4.1	18.3	
27	2010-11-27	21.4	3.6	25.0	
28	2010-11-28	24.0	3.6	27.6	
29	2010-11-29	22.1	2.1	24.2	
30	2010-11-30	18.1	5.3	23.4	
31	2010-11-31	17.3	3.2	20.5	
<b>Total</b>		<b>603.4</b>	<b>70.1</b>	<b>673.5</b>	

\* Consumption data are updated each day at 1:00 AM

# InsaCargo

## State of the Art Cargo Management System



Do you need the world's most flexible cargo and ballast system for a product tanker then InsaCargo is worth considering. It's the perfect retro-fit concept.

Only recognized components from suppliers with global service centers are used. Ensuring complete flexibility to be able to adapt to any situation, either a partial or total replacement of the current Cargo Management System.

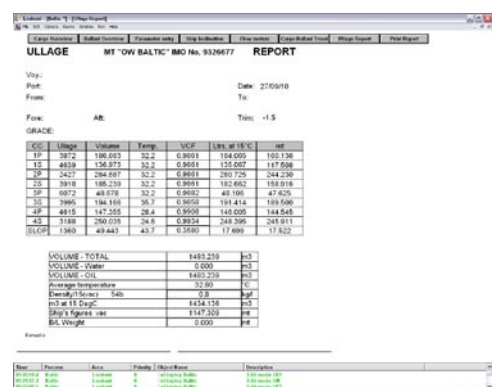
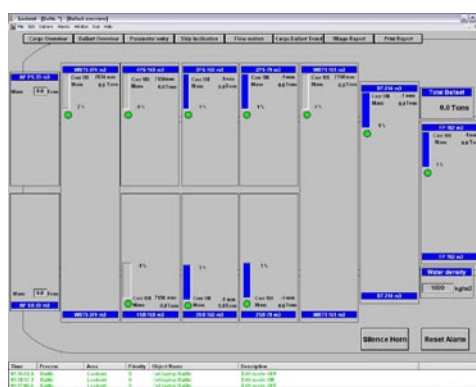
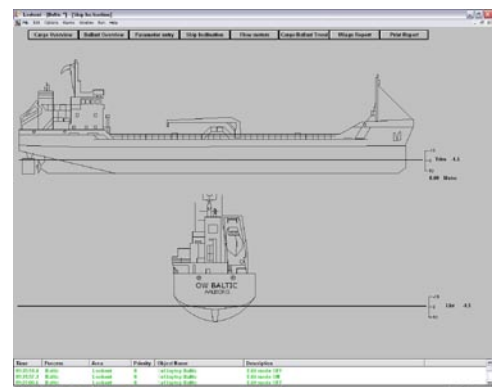
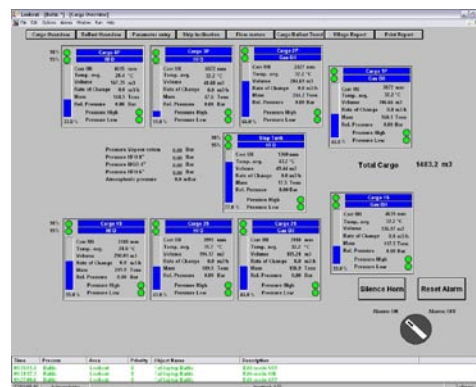
Inscargo and the equipment used for the system are obviously approved for the Marine industry. We can provide approvals from all major authorities.

Besides offering information on levels in your tank and a 95/98% alert, we offer several special features such as:

- **Inclination**
- **Ullage Report**
- **Filling Speed**
- **Volume Correction**
- **Temperature profile**
- **Full hour Logging**

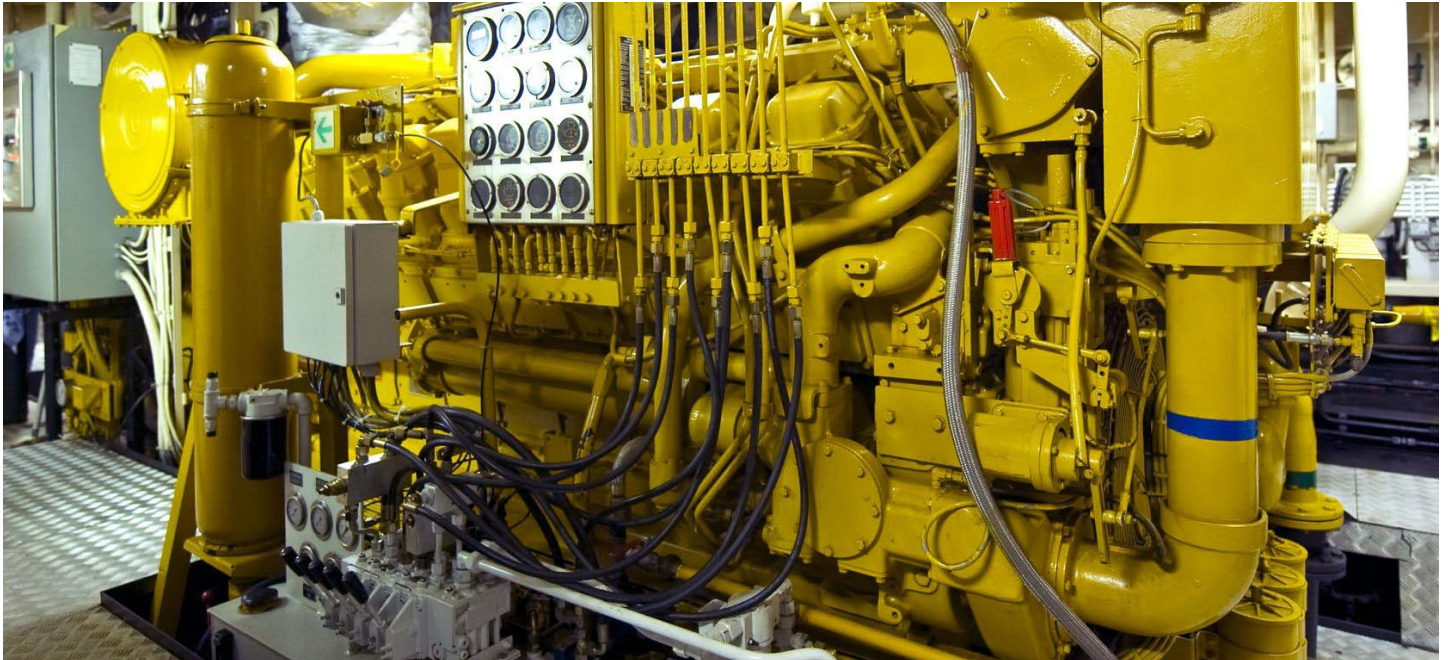
Instatech can offer the complete solution including all engineering and installation responsibilities.

Below are shown a few screen dumps from user interface,



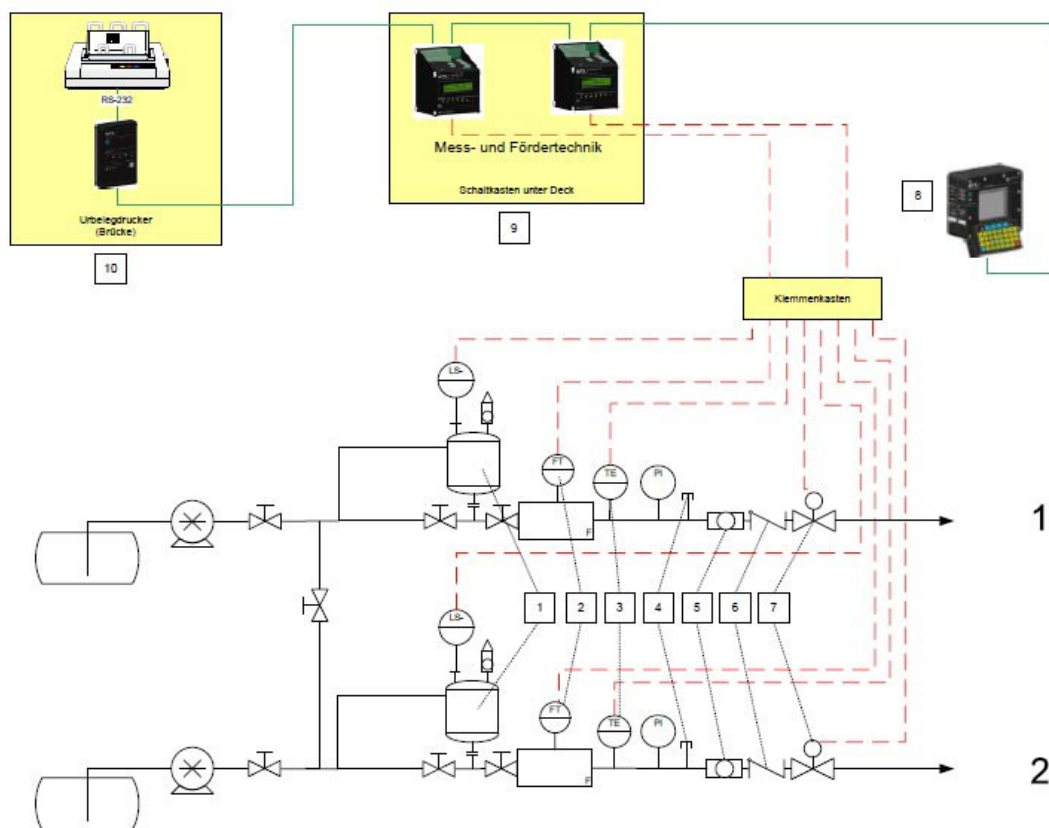
# MID

## MID Solutions - custody transfer – Approved flow measurements



With Mess & Fördertechnik as a partner, Insatech can offer many kinds of custody transfer flow measurements. We have references from all kinds of terminals, truck loading stations, pipelines and ships. Media can be varied; however the most typical is oil in different types and grades.

We primarily work within the standards **MID OIML R117-1** and can offer a complete kit for your particular needs.



The above picture shows a concrete project with 2 strings which made a MID OIML R117-1 measurement of liquid in the tank, but with a possibility that one string can be standby for the other, to ensure high reliability.

# Marine Calibrators

We introduce calibration solutions for the Marine and Offshore Industry



**Temperature calibration tasks, typically:** -40 ° C in environment temperature to 150 ° C  
30 ° C to 650 ° C

**Pneumatic pressure calibration tasks:** 95% Vacuum to 60 barg  
Hydraulic: 0 to 700 Bar

**Test and simulation** Simple Loop Calibrators and Multifunction Calibrators for weighing / load from 1 to 120 Tons SWL

The equipment can be purchased as single components, or we can deliver configurable / customized solutions in transport boxes.



Marine Test Case



PC 705



Load Calibration Kit

# On-line monitoring of ballast water

Prevents oil leaks in your ballast water



Oilcon Mark 6 discharge monitoring and control system is state of the art monitoring system of ballast for all types of vessels.

The latest Mark 6 version will also be equipped with GPS tracking, according to the latest regulations.

VAF's Oilcon Mark 6 is probably the best known unit in the market is recognized by all major authorities and of course with all relevant ship approvals.

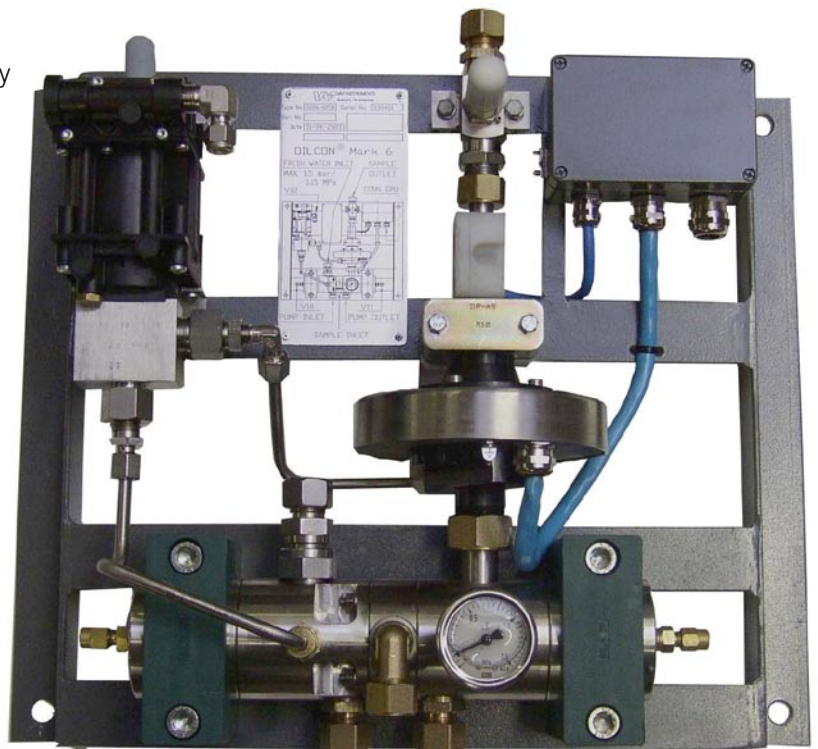
A complete control unit keeps track of that you comply with the applicable environmental requirements and can document this in the correct manner.

The entire system is supplied as a complete skid, calibrated and ready for use with a simple installation, which will be conducted by ship's personnel.

The system is self-calibrating, with no moving parts and requires no maintenance

The system comes as a complete skid.

Download our data sheet from our web site and learn more about this solution.



If you want more information please contact  
Kenneth Andersson  
tel. +45 2085 6078  
kra@insatech.com



## About us

Insatech A/S was established in 1989, and has, over the years, had a positive business development; today we are more than 40 employees, and are considered one of the market leaders.

We are based in Vordingborg in the south of Zealand, in an old historic building.

Since December 2005 we are part of the Addtech Group of companies – Addtech AB, Stockholm.

In 2007 a professional calibration laboratory (DANAK accreditation for calibration of conductivity measuring equipment) was established as the first in the world.

Besides the headquarters in Vordingborg / Zealand, we have external technical consultants, located around the country.

The rest of the team is situated in Vordingborg / Zealand - providing you and your business a professional service.

Our Sales-, Service- and System team consists of experienced employees, with extensive knowledge of our entire product range – as well as thorough application knowledge, in all industries we deal with. We always have a technician near you - wherever you need us.

As a result of our longstanding partnership with some of the world's leading manufacturers within instrumentation and automation, we are able to provide a global service.

We supply quality products, solutions and services in the fields of measurement, control and calibration to nearly all industrial segments, as well as utilities, and we work as a professional partner for our suppliers and for our customers – we believe in long relationships.

Our main markets are in the Pharmaceutical, Food, Energy, Marine /Oil & Gas Industry, which means we have a strong knowledge of the special applications, as well as the requirements for documentation in these areas.

## Our main business areas:

- Process instrumentation and calibration equipment
- Automation, control and data acquisition
- System design, engineering and validation (DCS and Safety Systems)
- Service/maintenance and calibration (ISO 17025 accreditation)
- Site surveys and evaluation of process optimization based on better control practices
- Marine- and ship solutions, Cargo Management Systems
- Project Management
- Flow rigs/ calibration rigs
- Special fittings
- Product enhancements
- Wireless solutions for monitoring and control
- Complete solutions including panels and commissioning
- Seminars and training



**DANAK**  
CAL Reg. Nr. 484  
Conductivity calibration  
Temperature calibration  
Electrical calibration

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## Products and Services

### Accredited Calibration:

Conductivity  
(Master meter)

### Analysis of gases:

Ammonia - NH<sub>3</sub>  
Moisture - H<sub>2</sub>O  
Oxygen - O<sub>2</sub>  
Carbon dioxide-CO<sub>2</sub>  
Carbon monoxide - CO  
Methane - CH<sub>4</sub>  
Hydrochloric acid - HCl  
Water - HO<sub>2</sub>

### Analysis of liquids:

Cell density  
Density  
Color  
Conductivity  
Concentration  
Carbon dioxide - CO<sub>2</sub>  
Live Cells  
Sound speed  
NIR  
Dissolved Oxygen  
pH  
Plato  
Protein  
Refractive index  
Turbidity  
Solids Viscosity

### Analysis of solids:

Moisture  
Fat  
Protein

### Calibration:

Flow  
Temperature  
Pressure  
Simulators

### Control and Systems:

DCS Systems  
Shut Down & security systems  
MES systems  
Blending Systems  
MID Solutions  
SEEMP

### Controllers:

Auto-tuning  
Fuzzy-logic  
Single-and multi-loop

### Courses:

Customized seminars and trainings

### Flow Measurement

#### Solids:

Microwaves

### Flow Measurement:

Custody transfer  
Coriolis massflow  
Differential - orifice / pitot tube  
Flowswitch  
Magnetic inductive  
Mechanical  
Rotameters V / A  
Thermal massflow  
Ultrasonic (Clamp-on and in-line)  
Vortex

### Level Measurement:

Electromechanical  
Displacement  
Hydrostatic pressure  
Capacitive  
Conductive  
Microwaves  
Radar  
Radiometric  
Ultrasonic  
Vibration

### Pressure Measurement:

Absolute  
Differential  
Relative  
Calibrators  
Diaphragm seal  
Level  
Pressureswitch

### Registration & Data Collection:

Data loggers  
Data Acquisition Systems  
GPRS - wireless transmission  
Recorders  
Paperless recorders

### Services:

**Calibration:**  
Flow - gases and liquids  
Conductivity  
pH  
Temperature  
Pressure

### Accredited Calibration:

Conductivity  
Temperature  
Electrical

### Service:

Project Solutions  
Control / Periodic maintenance  
Services and inspections

### Temperature:

Calibrators  
Sensors  
Thermoelements  
Transmitters