VISY-X
Automatic Tank Gauging System
for the best possible fill level monitoring

- Timely fuel reordering
- Early leak detection
- Identification of fuel theft
- Reliable quality assurance for stored fuels
- Coordinated service visits
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Measurable advantages that count.

VISY-X system advantages at a glance

Optimized efficiency in petrol station operation
» No shutdown during sensor maintenance, because our all-stainless-steel sensors are maintenance-free
» Easy installation keeps downtime brief when installing our products
» Leaks and theft identified immediately
» Timely fuel reordering is assured

Continuous, reliable monitoring of fill level and fuel quality
» Actual fill levels in real time
» Personal, mobile access to all data
» All data stored to your own server
» Attractive graphic display of data

Precise fill level measurement
» Our sensors’ magnetorestrictive measurement is more precise and more resistant to malfunction than many other measurement methods on the market

Versatile solutions for all applications
» A sensor for all fuel types
» Optimal product solutions even for special or difficult applications

Optimal product price/performance ratio
» More attractive acquisition costs than comparable systems
» Utmost product precision and dependability

Low installation cost
» Easy plug-and-play assembly
» Proven radio transmission of data, no more expensive cabling on site

Data misuse is impossible
» All data are stored on your server only
» Secure VPN connection, data are transferred with encryption

Easy integration into existing operating and ERP systems
» Data are provided as generally readable XML files
» VISY-X can be easily integrated into existing systems

Our products are approved worldwide
» ATEX, NEPSI, IECEx, CCoE, EAC-Ex, CPA and OIML
VISY-X system architecture

Modular: Choose only the products you need.

Further system components can be added with a software upgrade, if necessary.
SECON
More efficient petrol station management in the cloud (hosting)
24/7 worldwide access to your data

Product features and the advantages of FAFNIR technology

- Web-based interface  
  Worldwide access to real-time data
- Local client-side server  
  Guaranteed strong data protection
- Standardised data format (XML)  
  Easy further processing on all current operating and ERP systems
- Remote access through Internet tunnel with 1024-bit VPN encryption  
  High data security
- Remote diagnostics  
  Optimized service interventions
- Hierarchical data access  
  Company-specific access rights
- Minimum of 10 years data protection  
  Thorough data analysis of warehouse inventories, deliveries, alarms, etc.
The SECON-X Cloud

SECON-X is a hardware-software-network system which comprises several components (see figure below) and performs the following tasks:

» Global data access to the SECON clients with web interface
» Remote diagnostics
» Remote display, evaluation and data storage
» Universal data format

SECON-X Components

SECON devices (SECON clients)

ECON-111-0016  ECON-111-0027  ...  ECON-XXX-YYYY

SECON server

Internet

Secure and encrypted VPN connection

VPC VPN
LAN/WAN

User devices (USER-Clients)

USER-111-0001  USER-111-0002  USER-111-0003  ...

USER-AAA-BBBB
VISY-Stick
Precise sensor for continuous monitoring of liquid levels and leakages

Product features and the advantages of FAFNIR technology

- Sensor and float made of premium stainless steel
- Sensor for continuous high-precision measurement of product fill level, product temperature (5 pcs PT1000) and water level
- Calibrated and fully loaded
- Suitable for all commercially available fuels
- High-precision temperature compensation by 5 pcs PT1000 units
- 4-wire, unshielded data cable
- Continuous function monitoring
- Worldwide approvals for Ex Zone 0, ATEX, IECEx, NEPSI, EAC-Ex and CCoE
- Requires just 1½” tank openings for installation (optional 1” float available)

- Long-lasting and maintenance-free
- Precise and reliable
- Real-time measurement every 12 ms
- Easy plug-and-play installation
- SUPER, E10, E85, Diesel, BioDiesel, LPG, AdBlue
- Best determination of temperature-compensated volume
- Simple installation and connection of up to 4 different probes in parallel possible
- Immediate alarm for tampering or malfunction
- Can be used internationally
- Cost-efficient installation

The magnetostrictive sensors VISY-Stick with screw-in unit (left) and for riser installation (right)
VISY-Density with VISY-Stick Advanced
Density measurement for continuous monitoring of fuel quality

Product features and the advantages of FAFNIR technology

- Continuous measurement with utmost accuracy
  - Four measured values with a single probe:
    - product fill level
    - product temperature
    - water level
    - density

- Water determination
  - Especially for ethanol

- Compact design
  - Needs just a 2” opening

- Precision better than ±2 g/l
  - Meets all requirements

The magnetostrictive sensors
VISY-Stick Advanced Density with screw-in unit (left) and for riser installation (right)
**FLEX**

The economical solution for tall tanks

### Product features and the advantages of FAFNIR technology

<table>
<thead>
<tr>
<th>Feature</th>
<th>Advantage</th>
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<tbody>
<tr>
<td>Compact packaging</td>
<td>Low transport cost</td>
</tr>
<tr>
<td>Easy to install and configure</td>
<td>Short installation time, lowers installation cost</td>
</tr>
<tr>
<td>Meets all requirements</td>
<td>Four functions in a single device:</td>
</tr>
<tr>
<td></td>
<td>- fuel</td>
</tr>
<tr>
<td></td>
<td>- water</td>
</tr>
<tr>
<td></td>
<td>- temperature</td>
</tr>
<tr>
<td></td>
<td>- density (density module required)</td>
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**VISY-Stick Flex** is a level sensor specially designed for bulk storage tanks and density modules.

**LPG**

Specially developed for precise LPG fill level measurement

### Product features and the advantages of FAFNIR technology

<table>
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<tr>
<th>Feature</th>
<th>Advantage</th>
</tr>
</thead>
<tbody>
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<td>Installation kit available</td>
<td>Quick, easy installation without emptying the tank</td>
</tr>
<tr>
<td>Up to 6 m long</td>
<td>Suitable for all tank shapes and sizes</td>
</tr>
<tr>
<td>Requires just 1½” tank opening</td>
<td>Cost-efficient installation</td>
</tr>
<tr>
<td>(optional 1” float available)</td>
<td></td>
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**VISY-Stick LPG** for direct installation in the tank.
VISY-Stick oil separator + VISY-Sludge
The pair that monitors the oil separator

Product features and the advantages of FAFNIR technology

Continuous measurement of the oil layer thickness and sludge height

Alert management

Seamless operating log per DIN 1999-10:
Intelligent recording interval
Password-protected
Data export in XML format
Data storage for at least 5 years

Acoustic and visual alarm with acknowledgement and e-mail notification of:
Maximum oil level
Maximum sludge height
High level

VISY-Stick oil separator

VISY-Sludge
VISY-Stick Interstitial
Especially for leakage detection in double-walled tanks

Product features and the advantages of FAFNIR technology

- Immediate alarm when a leak occurs
- Easy, cost-efficient installation and commissioning
- Configurable alarm area

- Acoustic and visual alarm with acknowledgement and e-mail notification
- Parallel connection eliminates additional cable costs
- Can be custom adapted to an existing system

VISY-Stick Interstitial with screw-in unit (left) and for riser installation (right)

VISY-Stick Sump Sensor
For liquid monitoring in manhole and dispenser sumps

Product features and the advantages of FAFNIR technology

- Sensor distinguishes between water and fuel with different alarms
- Continuous self-monitoring

- Individual activities, such as:
  - fuel alarm = shut off dispenser
  - Water alarm = call to service company
- Immediate alarm upon tampering with the installation conditions or when a sensor malfunctions

VISY-Stick Sump: blue for manhole sump, red for dispenser sump. Right: Installation kit
VISY-Reed Interstitial
Very robust sensor for cost-effective leakage detection in double-walled tanks

Product features and the advantages of FAFNIR technology

Robust nickel-plated brass housing with stainless-steel float  Long service life
Efficient design for direct fluid detection  Low cost
Continuous self-monitoring of sensor functionality Immediate alarm in the event of malfunction
Suitable for riser installation with opening of 1" or more Minimized installation cost

VISY-Reed Interstitial Dry

VISY-Reed Sump
For liquid monitoring in manhole and dispenser sumps

Product features and the advantages of FAFNIR technology

Robust nickel-plated brass housing with stainless-steel float  Long service life
Efficient design for direct liquid detection  Low cost
Continuous self-monitoring of sensor functionality Immediate alarm in the event of malfunction

VISY-Reed Sump
VISY-Command

Versatile, cost-effective measurement evaluation unit for connection to cash register systems

Product features and the advantages of FAFNIR technology

- Parallel connection of 4 different sensors to one connection channel possible
- Fully modular architecture
- Ethernet interface optional
- Free firmware updates

⇒ Reduced installation cost — less cable needed
⇒ Simple addition of sensors and extension of system architecture
⇒ Remote access to tank and environmental data
⇒ Always state of the art
VISY-Command GUI
Direct access to measurement evaluation unit through touchscreen or printer

Product features and the advantages of FAFNIR technology

- Colour display with touchscreen = Information at a glance
- Audible alarm must be confirmed by petrol station staff = Additional security
- Data storage up to 5 years = Thorough inventory analysis
- E-mail function = Alarm messages directly to the service partner or individual address
- Daily report = Message to the station manager every 24 hours
- Oil separator monitoring = Operating log maintained in system
- Static leakage detection = Theft monitoring - alarm by e-mail
VISY-RF

Allows connection to VISY probes through WiFi and a VISY-Command RF

Product features and the advantages of FAFNIR technology

Compatible with all VISY components  ⇒  Standard components can be used

Battery life up to 4 years  ⇒  Low maintenance cost

Easy to install and configure  ⇒  Minimizes downtime

Indicates battery status and field strength  ⇒  Optimized service and maintenance

A market-proven system  ⇒  Best, most reliable functionality
VISY-Input
Integration of external alarms in the VISY system

Product features and the advantages of FAFNIR technology
External alarms centrally processed by the VISY system  ➞  Simple monitoring of external alarms
Easy to install and configure  ➞  Low installation cost

VISY-Output
Triggers external alarm systems

Product features and the advantages of FAFNIR technology
All alarms can be freely assigned to relays  ➞  Clear alarm structure
Easy to install and configure  ➞  Low installation cost

The input module VISY-Input
External component for complex alarm systems
8 connections
VISY-TD Display
Immediate visual information on ullage in tank

Product features and the advantages of FAFNIR technology

Easy to install  ⇒  Low installation cost

Good display contrast  ⇒  Easy legible data
VPI
VISY-Power Interface

Product features and the advantages of FAFNIR technology

Parallel connection of 4 different sensors to one connection channel possible

⇒ Reduced installation cost — less cable needed

Parallel connection of 32 VPIs possible, allows up to 256 tanks to be monitored and 1024 sensors to be connected

⇒ Easy addition of sensors

Communication interface between the sensors and a higher-level system (host)

⇒ Supports two protocols
  » FAFNIR Universal Device Protokol (UDP)
  » H-Protocol

Delivers raw sensor data

⇒ Free configuration of application and display

FAFNIR VPI-Supply power supply unit supplies up to two VPIs

⇒ One’s own power supply unit can optionally be used

VPI + power supply unit

VPI
Accessories

1" LPG float
Optionally available instead of the standard 1½" LPG float.

VISY-RFT installation kit
Installation kit for mounting a VISY-RFT transmitter module.

Cable connector
The 5-pin cable coupler makes it quick and easy to establish the connection between the VISY-Stick and the cable to the VISY-Command.
1” float set with screw-in unit

The optional installation kit comprises a product float, a water float and a screw-in unit. It makes it possible to install a VISY-Stick using a G 1 threaded coupler. The screw-in unit is also available in stainless steel.

Variable LPG installation kit

The variable LPG installation kit consists of a jacketed pipe with special LPG float and a cutting ring fitting with ¾” NPT external thread.
FAFNIR GmbH: Innovation with Tradition. Quality and satisfaction

Company:
Based in Hamburg, Germany, since 1965 FAFNIR GmbH has developed and produced continuous fill level measurement, filling safety devices, overfill prevention devices and limit signal controls for fluids of all types. Optimisation of process controls, improvements in cost efficiency, and the protection of people and the environment are at the heart of our business. Our close, trusting relationship with our customers is a key factor in our practical implementation of innovative ideas and the functionality of our products.

Quality for your satisfaction:
To provide all customers with devices of consistently high quality, years ago FAFNIR introduced an internationally recognised, comprehensive quality management system in accordance with ISO 9001:2008 (EN 29001). Our expertise in developing and manufacturing explosion-proof equipment is independently certified. All our products are subject to strict FAFNIR quality requirements. We are committed to meeting international standards and applicable EU directives.