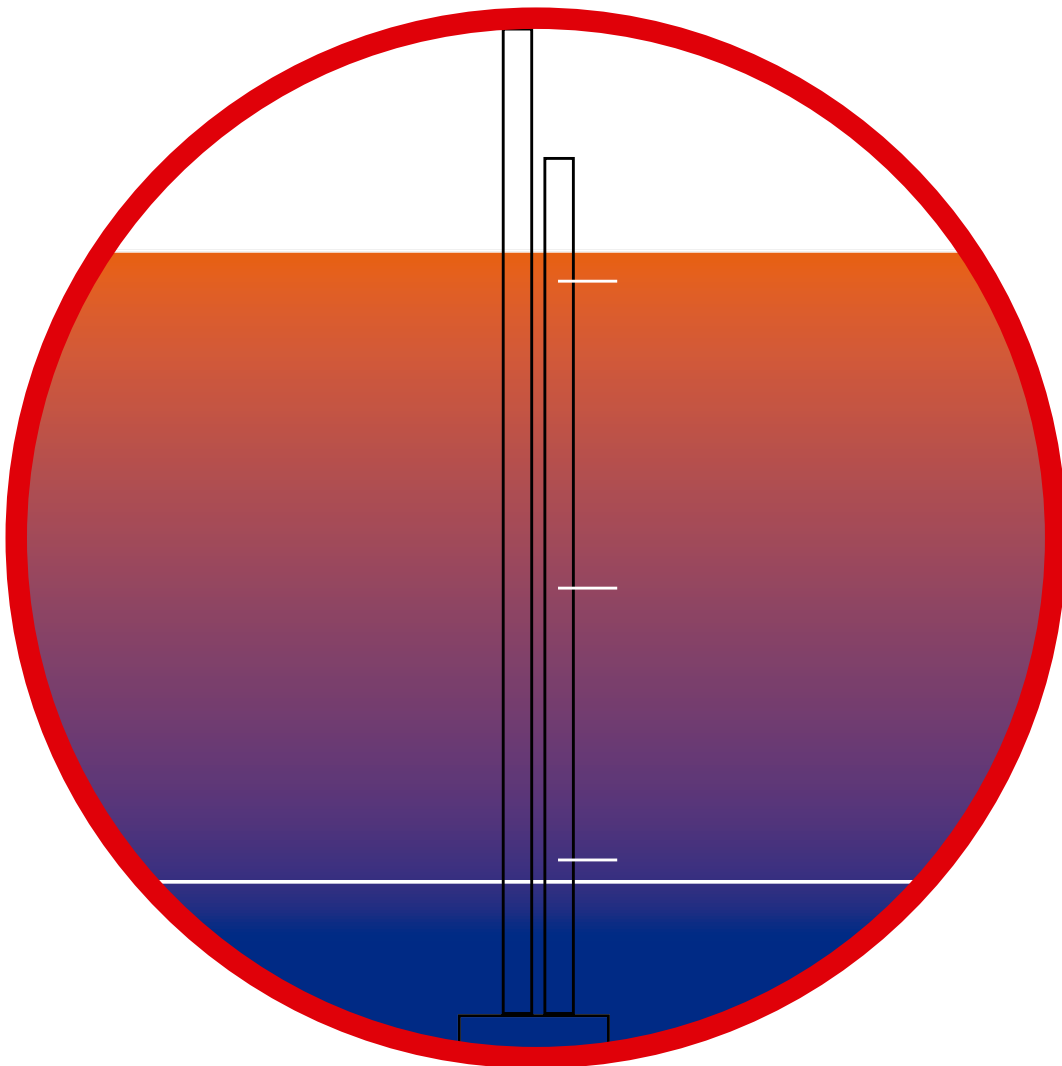


CUSTODY TRANSFER FOR FUEL TANKERS

Dezidata Electronic Dipstick System



GASSO

EDS. ELECTRONIC DIPSTICK SYSTEM

GASSÓ custody transfer solution

The DeziData Electronic Dipstick® was released into the international markets in 2000 and has so far been installed in more than 750 fuel tankers in different European countries for customers as Statoil, Shell, Aral, BP, Texaco, DEA, etc.

In the Middle East our leading customer is KNPC-Kuwait National Petroleum Company.



Main reasons to use GASSÓ EDS

The main reasons for our customers to step away from the traditional PD meters on fuel tankers to the DeziData electronic dipstick system® are:

■ GAIN OF TIME

Pressure drop of PD-Meter slow down flow rate, especially for gravity delivery Delivery times at service stations can now be reduced by more than 50%.

■ GAIN OF PAYLOAD

Compared to traditional PD measuring systems, tare weight can be reduced by more than 400kilos.

■ REDUCED SPACE REQUIREMENTS

Considerable gain of space as there is no need for measuring devices, degasers etc.on the fuel tanker.

■ VERY EXACT LEVEL DETERMINATION

By converting the speed from the level measurement with the sonic speed,avoiding the use of floats which can get stucked because of mechanical stress of the compartments.

■ TOTAL CONTROL ON PRODUCT QUANTITY AND QUALITY (PURITY).

No remaining quantities,compartments delivery lines, degazers or counters,product quality is indicated,other products like water detected.

■ TEMPERATURE COMPENSATION

The compensated and uncompensated volume is displayed and printed according to International Weights and Measures- OIML.

■ SEALED PARCEL DELIVERY PLUS (OPTION)

The volume in the compartments and delivery lines is monitored automatically (theft detection).

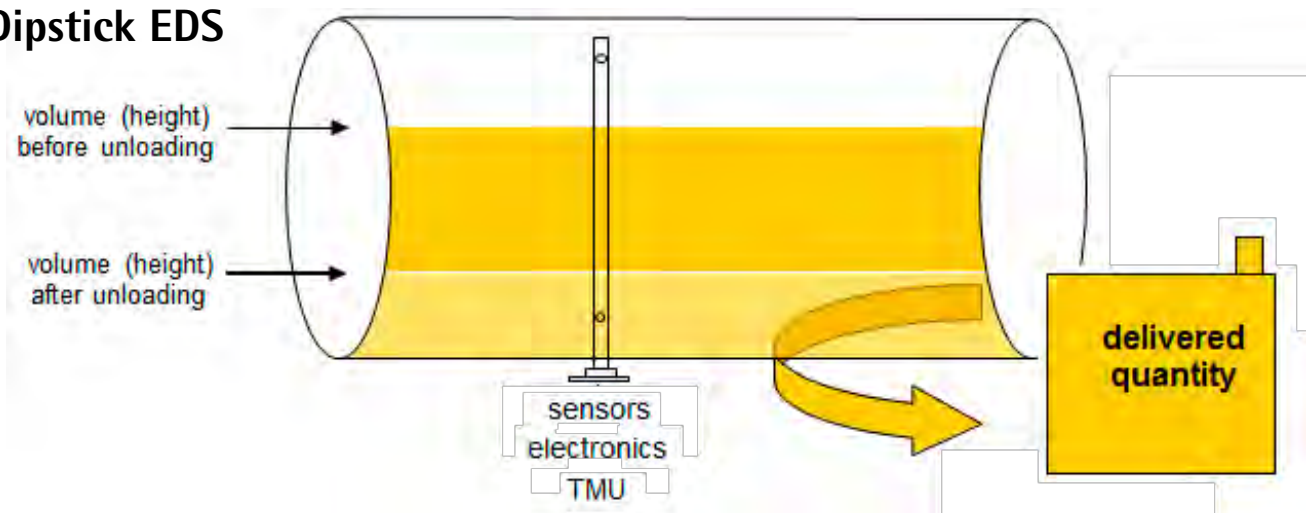
■ CROSS OVER PREVENTION DURING LOADING AND UNLOADING (OPTION)

The driver is warned if he intends to load (on the depot) and or to unload (on the service station) the wrong product,the system will prevent this.

■ SIMPLE TO OPERATE WITH REMOTE SERVICE OPTION

The DeziData monitor with Touchscreen is very simply to operate for the driver any assistance in case required can be done with a direct connection between the truck and our engineers in Spain and or Germany.

Dipstick EDS



COMPONENTS

DEZIDATA System just need 5 elements



Dip tube

1 - EACH COMPARTMENT HAS AN ULTRASONIC DIPTUBE® UNIT FOR VOLUME AND FOR DENSITY(MASS), NO MOVING PARTS IN THE MEASURING AS THE SYSTEM IS BASED ON SONIC SPEED REFLECTION.



2 - DIPTUBE LEVEL SENSOR FOR SIGNAL REFLECTION BOTTOM MOUNTED.



Level sensor

3 - THE DIPSTICK IS MOUNTED ON TOP OF THE COMPARTMENT IN A FLEXIBLE HOLDER TO AVOID DIPTUBE DAMAGE WHEN COMPARTMENTS ARE MOVING BECAUSE OF MECHANICAL STRESS.



Sliding holder

4 - INCLINATION SENSOR TO COMPENSATE FOR TRUCK ELEVATION DIFFERENCES.



Inclination sensor

5 - TRUCK MONITOR WITH TOUCH SCREEN:

- Total truck compartments data display in actual volume and mass
- Temperature compensation
- Gprs/gps interface
- Printer connection
- No mix and sealed parcel options
- Can bus/blue tooth Communications
- Remote maintenance and Diagnostics
- Data memory current/history
- Atex approved



DEZITOUCH

DATA

DEZIDATA System reports you all information you need

1 - MEASUREMENTS

- The measuring range for the height of the product is 3000 mm, resolution 0,1 mm
- The mass in kg will be calculated automatically by the system with the density measurement of the product multiplied with the measured liters this,also identifies the product purity.
- The volume in liters

2 - COMPATIBILITY

- DeziData system ®can be updated by software to a Nomix system, DEZICOP,to avoid crossover,according to European norm 14116.

A cross over prevention to avoid dangerous mixing of hazardous liquids,is already possible by measuring the product density with the current solution offered.

- DeziData system® can also be updated to a Sealed Parcel Delivery System.

3 - APPROVAL TO CUSTODY TRANSFER

- The system is approved by the authority of Weights and Measure in 13 European countries for custody transfer.

4 - ACCURACY

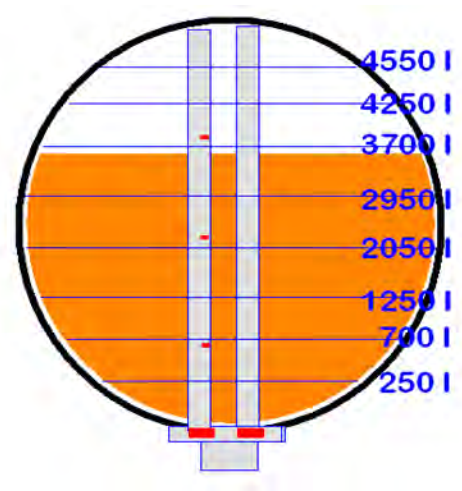
- The international metrological accuracy OIML needs to be as per the approval 0,5% which is also the same for meters.

The accuracy of the DeziData Electronic Dipstick® is however much better,in practice the accuracy for the delivery of a complete semi trailer is approx. + / - 0,1% for 36.000 liters this would be 36 liters.

Calculation of the volume by means of the dip table determined at the calibration with an **exactness better than 0,1**

5 - SAFETY

- All approvals are according to ATEX, the probes for Zone 0, IP 67 up to 69
- The enclosures are protected Exe mb ia IIB T4



ADVANTAGES

DEZIDATA System assure your benefits

1 - NO MOVING PARTS

As we have an ultrasonic ® patented system, no floats which can get stuck because of mechanical stress of the compartments.

2 - FOR CUSTODY TRANSFER

With all the required approvals like EU standard EN 14116 and EN 15208, Atex, TUV- PTB Germany.

3 - VOLUME AND MASS MEASURING

As part of our standard system Density-Volume-Mass, no extra mechanical parts required which can only display the product density as pre-set in the system which will not recognize changes like taking product out and putting water back in the compartments.

4 - ULTRASONIC SELF CLEANING FEATURE

Ultrasonic sound systems are also used to clean for example car engines, because of this we are able to give a warranty of 2 years on our Electronic Dipsticks®.

Our experience is that even after 10 years the system is still working without problems.

All other systems have problems with building up of dirt on the measuring points on the bottom of the compartments creating measurement problems.

5 - FLEXIBLE TOP COMPARTMENT CONNECTION

The Electronic Dipstick top connection is done with a flexible holder inside the compartments to avoid tube bending in case of mechanical stress of the compartment .

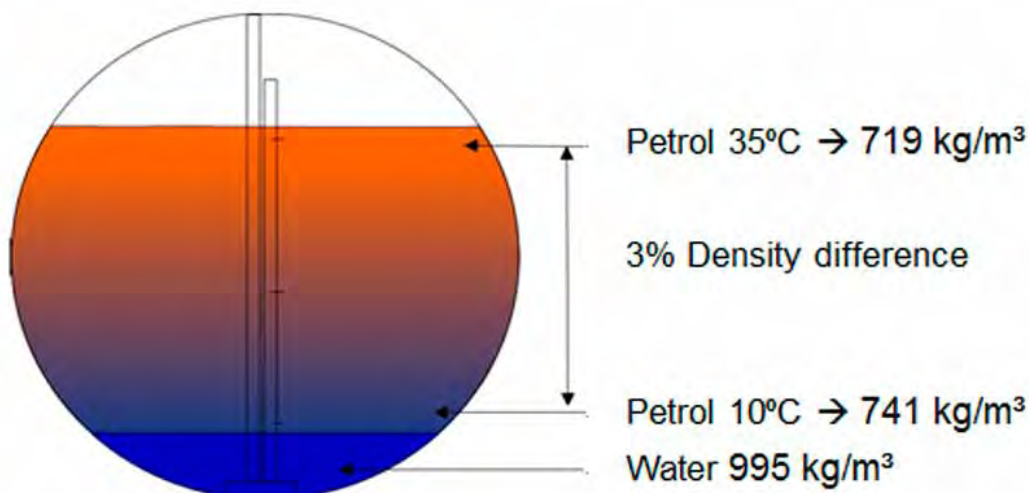
Thus avoiding incorrect readings and even floats which get stuck

6 - OPTIONS AVAILABLE

For Sealed parcel delivery and No mix of products with data communication.

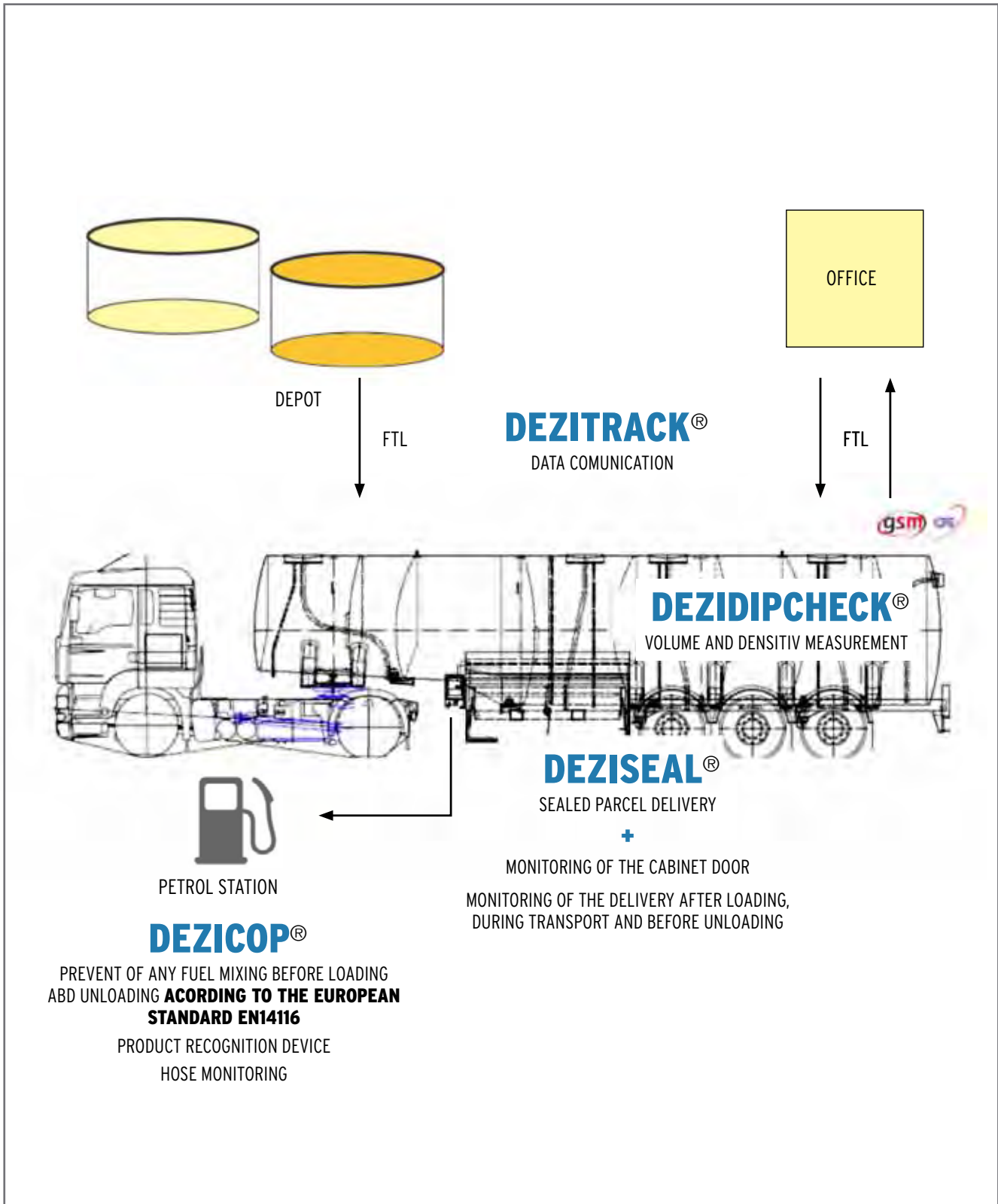
7 - BIGGEST INSTALLED BASE SINCE 2000

We have our system on more than 750x fuel tankers in Europe and Middle-East.



COMPLETE SOLUTION

All under control

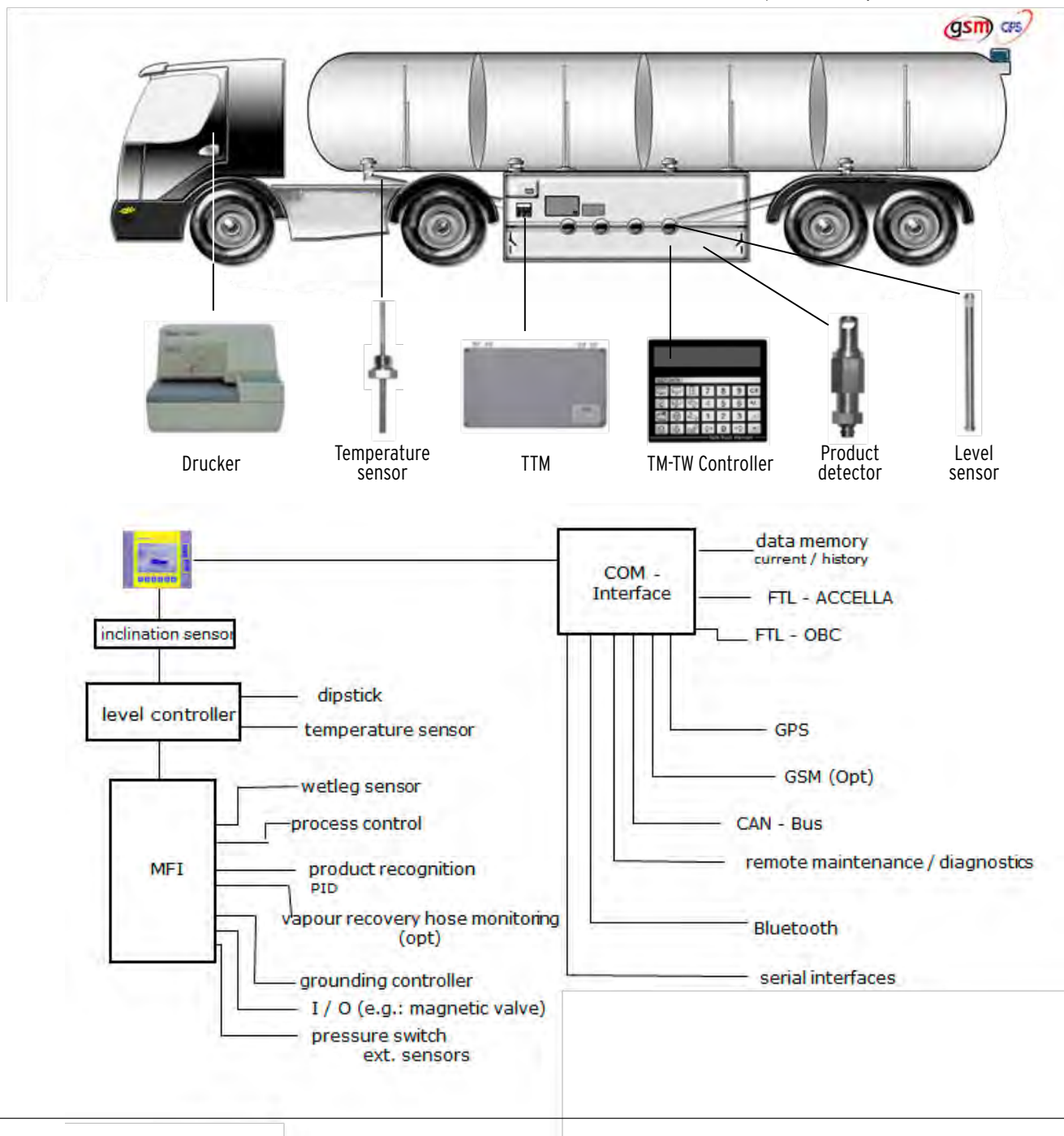


DEZIDATA

System overview

COMPLETE SYSTEM DCSTF

- D** ■ **DIPCHECK**® All electronic dipstick
- C** ■ **DEZICOP**® Prevention of fuel mixing
- S** ■ **DEZISEAL**® Sealed parcel delivery
- T** ■ **DEZITRACK**® Data communication/ vehicle localization
- F** ■ **DEZIFLOW**® Pumped delivery



www.gasso.com

Barcelona
(Sant Boi)

Tel. (+34) 93 652 98 00
Fax (+34) 93 652 98 04
gasso@gasso.com

Bizkaia

Tel. (+34) 94 471 03 35
Fax (+34) 94 471 03 57
gassobilbo@gasso.com

Madrid

Tel. (+34) 91 642 22 21
Fax (+34) 91 642 16 85
gassomadrid@gasso.com

Tarragona

Tel. (+34) 977 54 57 55
Fax (+34) 977 54 75 22
gassotarraco@gasso.com

Lisboa

Tel. (+351) 212267850
Fax (+351) 212267859
gassopt@gasso.com