

# FUEL DISPENSERS AND AUTOMATION FOR FLEET MANAGEMENT

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**EDITION 01-22**  
ATD06807 rev.0 of 01/22



## Simbol

# IP

### 1<sup>st</sup> digit

Protection against foreign solid bodies penetration

0

No protection

1

Protected against penetration of solid bodies of a size greater than 50 mm (hands)

2

Protected against penetration of solid bodies of a size greater than 12 mm (fingers)

3

Protected against penetration of solid bodies of a size greater than 2,5 mm (tools, cable)

4

Protected against penetration of solid bodies of a size greater than 1 mm (wires)

5

Protected against harmful dust devices that damage the proper operation

6

Totally protected against dust

### 2<sup>nd</sup> digit

Protection against liquid penetration

0

No protection

1

Protected against vertical dropping of water drops

2

Protected against drops of water droplets with a maximum tilt of 15° compared to the vertical

3

Protected against drops of water droplets with a maximum tilt of 60° compared to the vertical

4

Protected against splashing of water from all directions

5

Protected against splashing of water from all directions

6

Protected against water projections like the waves

7

Protected against the effects of immersion in water under certain conditions of duration and pressure

8

Protected against the effects of immersion in water under continuous pressure conditions

## INTRODUCTION

The equipment must be certified according to the regulations in force according to the use to which they are intended. Below are the symbols used and their references.

### EQUIPMENT CERTIFICATIONS



Compliant with 2014/34/EU ATEX Directive

MID

MID version for commercial transactions (module B+D) D. Lgs 19/05/2016 n. 84 - Implementation of the 2014/32/EU (MID) Directive

IP

Waterproof equipment according to the degree indicated (Norm EN 60529, EN 60529/A1)



Conformed to the Ministerial Decree of July 31, 1934

Safety standards for working, storage, use or sale and for the transport of liquids of category C (Diesel)

MI.SA. (88)

Conformed to the Ministerial Decree of May 5, 1988, N 53 and Circular MISA N (88)-7 of May 4, 1988  
Leakage control along the delivery line



Device with EU declaration of conformity

Conforms to the safety requirements of EC directives: "Electrical Equipment Machinery" EN 60204-1, "Machinery Directive" 2006/42/EC, "Electromagnetic Compatibility" 2014/30/EU, "Low Voltage" 2014/35/EU



Approved for use on motor vehicles



Equipment meeting the requirements of OPBT analogous to the EU Low Voltage Directive 2014/35/EU (mandatory for equipment used on the Swiss market)

### ASSYTECH CERTIFICATIONS



ISO 9001:2015 Certificate



Certified Laboratory with Determination No. 40 of 17/02/2011 by CCIAA of Sondrio, N. assigned SO02



Certified Laboratory with Determination No. 262 of 29/07/2013 by Unioncamere, N. assigned SO143



Nato Cage Code AF742

*Note: Products in this catalog unless otherwise stated are in compliance with EU regulations*

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*Important note.*

*We reserve the right to make changes to the Refuelling system Fleet plant management and monitoring catalogue 2022, if necessary.*

*This catalog will come into effect on 01/01/2022.*





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# FUEL DISPENSERS



## **DIESEL FUEL DISPENSER FOR MOVABLE TANKS**

### **AT01 DIESEL DISPENSER FOR MOVABLE TANKS**

Diesel fuel dispenser for installation on movable tanks, fleets version, single hydraulic, volumetric, complete with filter, pump and gas separator, display on one side and electronic totalizer. ZVA ATEX certificated automatic nozzle. MID version for commercial transactions. For professional use. Stainless steel structure.

**Special execution with opening of the doors on the lateral sides, that allows to carry out a complete maintenance despite having installed close to the tank.**

**Possibility to read tank fuel level, leak management and integration of management terminal.**

MID accuracy  $\pm 0,5\%$ . MID B+D Certificate.



MID, single hydraulic, single-front, volumetric diesel dispenser for movable tank.		
Accuracy	$\pm 0,5\%$ (MID)	
Dimensions	485X520H1218 mm	
External structure material	Stainless steel	
Marking	CE-M EU Type Approval No. T10820 (MID 2014/32/UE)	
Flow rate	Pump	Code
40 l/min	RTF	AT01 A 1 2 0 G M V M
70 l/min	RTF	AT01 A 1 7 0 G M V M
80 l/min	RTF	AT01 A 1 3 0 G M V M
120 l/min	RTF	AT01 A 1 4 0 G M V M

*Lateral opening*



## Accessories for AT01 diesel fuel dispenser



MECHANICAL ANTI-SIPHON VALVE to be installed in the upper part of the tank to prevent the transfer of fuel in case of leaks.

Flow rate	90 l/min	
Max pressure	3,4 bar	
<i>Dimensions</i>		<i>Code</i>
F 1" 1/2 F 1" 1/2		AT00308



ELECTRICAL ANTI-SIPHON VALVE to be install at the fuel outlet to avoid the transfer of the product in case of leaks.

Power supply	24 VAC		
Flow rate	280 Kv		
Pressure	0÷16 bar		
Gasket	Viton (FKM)		
Marking	ATEX II 2G Ex d IIC T6 Gb		
<i>Dimensions</i>	<i>Power supply</i>	<i>Version</i>	<i>Code</i>
G 1" 1/2	24 VAC	IP67	AT09610/1.5/024/I

For standard accessories see "Accessories for fuel dispenser" chapter.

## DIESEL FUEL DISPENSER FOR FORECOURT

### AT02 DIESEL FUEL DISPENSER

Diesel dispenser, fleets version, single hydraulic, volumetric, complete with filter, pump and gas separator, display on one side and electronic totalizer. ZVA ATEX certificated automatic nozzle. MID version for commercial transactions. For professional use. Stainless steel structure.

**Special execution with opening of the doors on the lateral sides, that allows to carry out a complete maintenance despite having installed close to the tank.**

**Possibility to read tank fuel level, leak management and integration of management terminal.**

MID accuracy  $\pm 0,5\%$ . MID B+D Certificate.



MID, single hydraulic, single-front, volumetric diesel dispenser.			
Accuracy	$\pm 0,5\%$ (MID)		
Dimensions	485X520H1468 mm		
External structure	Stainless steel		
Marking	CE-M EU Type Approval No. T10820 (MID 2014/32/UE)		
<i>Flow rate</i>	<i>Pump</i>	<i>Code</i>	
40 l/min	RTF	AT02 A 1 2 0 G M V M	
70 l/min	RTF	AT02 A 1 7 0 G M V M	
80 l/min	RTF	AT02 A 1 3 0 G M V M	
120 l/min	RTF	AT02 A 1 4 0 G M V M	

*Lateral opening*

## FUEL DISPENSER FOR FORECOURT

### AT02/LC FUEL DISPENSER

Fuel dispenser, fleets version, single hydraulic, volumetric, complete with filter, pump and gas separator, display on one or two side and electronic totalizer. ZVA ATEX certificated automatic nozzle. MID version for commercial transactions. For professional use. Stainless steel structure. Vapor recovery system in the petrol version.

**Possibility to read tank fuel level, leak management and integration of management system.**

MID accuracy  $\pm 0,5\%$ . MID B+D Certificate. ATEX Certificate.



MID, single hydraulic, two-sides, volumetric gasoline and diesel dispenser.

Accuracy	$\pm 0,5\%$ (MID)
Dimensions	485X448H1505 mm
External structure	Satinless steel
Marking	CE-M EU Type Approval No. T10820 (MID 2014/32/UE) CE II 2G Ex IIA T3 Gb (ATEX 2014/34/UE) (Gasoline) CE II 3G Ex IIA T3 Gc (ATEX 2014/34/UE) (Diesel)

Flow rate	Product	Pump	Code
40 l/min	Diesel	RTF	AT02/LC A 1 2 0 G N B V M
40 l/min	Gasoline	RTF	AT02/LC A 1 2 0 B N B V M
70 l/min	Diesel	RTF	AT02/LC A 1 7 0 G N B V M
80 l/min	Diesel	RTF	AT02/LC A 1 3 0 G N B V M
120 l/min	Diesel	RTF	AT02/LC A 1 4 0 G N B V M



1. AT02/LC series dispenser
2. CPT33107 RFID wireless antenna for delivery nozzle
3. AT12212 radio receiver for nozzle RFID antenna
4. AT05910/T serial interface for 1 level gauge
5. AT49506 additional water filter
6. AT15610 level measurement gauge
7. AT05610 densimeter for diesel
8. CPTL07/D-E liquid presence sensor for tank wells
9. CPTL07/B-C liquid presence sensor for dispenser wells
10. AT08010 manhole covers opening alarm



## AT15 FUEL AND ADBLUE® DISPENSER

Fuel dispenser, fleets version, single or double hydraulic, volumetric, complete with filter, pump and gas separator. AdBlue® part arranged for submersible pump. With volumetric display and electronic totalizer. ZVA ATEX certificated automatic nozzle. MID version for commercial transactions. For professional use. Stainless steel structure. Vapor recovery system in the petrol version. **Possibility to read tank fuel level, leak management and integration of management terminal.**

MID accuracy  $\pm 0,5\%$ . MID B+D Certificate. ATEX II 2G/3G Certificate. Accuracy  $\pm 1,5\%$  for AdBlue® part (private use).



Dispenser of gasoline (B), diesel (G), diesel/diesel (G/G), diesel/gasoline (G/B), AdBlue® (A), AdBlue®/diesel (A/G), suction pump for diesel version, arranged for submersible pump for AdBlue® version, two-side, volumetric.

Accuracy	$\pm 0,5\%$ (MID) (M); $\pm 1,5\%$ (private use) (I) (only AdBlue®)
Dimensions	820X470H1500 mm
External structure material	Stainless steel
Marking for diesel	CE-M EU Type Approval No. T10820 (MID 2014/32/UE) CE II 2G Ex IIA T3 Gb (ATEX 2014/34/UE) (Gasoline) CE II 3G Ex IIA T3 Gc (ATEX 2014/34/UE) (Diesel)
Marking for AdBlue®	CE-M EU Type Approval No. T10821 (MID 2014/32/EU)

Flow rate	Pump	Hydraulics	Product	Code
40 l/min	RTF	Single	G	AT15 A 1 2 0 G N B V M
70 l/min	RTF	Single	G	AT15 A 1 7 0 G N B V M
80 l/min	RTF	Single	G	AT15 A 1 3 0 G N B V M
120 l/min	RTF	Single	G	AT15 A 1 4 0 G N B V M
180 l/min	RTF	Single	G	AT15 A 5 5 0 G N B V M
40/70 l/min	RTF	Double one-pump	G/G	AT15 A 3 2 7 G G B V M
40/80 l/min	RTF	Double one-pump	G/G	AT15 A 3 2 3 G G B V M
40/40 l/min	RTF	Double two-pumps	G/G	AT15 A 2 2 2 G G B V M
40/70 l/min	RTF	Double two-pumps	G/G	AT15 A 2 2 7 G G B V M
40/80 l/min	RTF	Double two-pumps	G/G	AT15 A 2 2 3 G G B V M
70/70 l/min	RTF	Double two-pumps	G/G	AT15 A 2 7 7 G G B V M
80/80 l/min	RTF	Double two-pumps	G/G	AT15 A 2 3 3 G G B V M
70/120 l/min	RTF	Double two-pumps	G/G	AT15 A 2 7 4 G G B V M
80/120 l/min	RTF	Double two-pumps	G/G	AT15 A 2 3 4 G G B V M
120/120 l/min	RTF	Double two-pumps	G/G	AT15 A 2 4 4 G G B V M
40 l/min	RTF	Single	B	AT15 A 1 2 0 B N B V M
40/40 l/min	RTF	Double two-pumps	B/B	AT15 A 2 2 2 B B B V M
40/80 l/min	RTF	Double two-pumps	B/G	AT15 A 2 2 3 B G B V M
40 l/min	RTF	Single	A	AT15 S 1 2 0 A N B V I
40/40 l/min	RTF	Double	A/G	AT15 D 6 2 2 A G B V I M
40/70 l/min	RTF	Double	A/G	AT15 D 6 2 7 A G B V I M
40/80 l/min	RTF	Double	A/G	AT15 D 6 2 3 A G B V I M
120/40 l/min	RTF	Double	G/A	AT15 D 6 4 2 G A B V M I

## AT02/LC AVIO FUEL DISPENSER

Avio fuel dispenser, single hydraulic, single-side, volumetric (or comptometric), complete with stainless steel 100 µm reusable filter, predetermination valve, secondary filter flow rate of 60 l/min and filtration 0.5 µm according to API/IP 1583 (only in AV-Gas version 40 l / min ) and gas separator device. S Nozzle complete of cable with grounding clip, dust cap and filter. Light tube type complete with yellow band in the version JET A1. Electronic computing head with LCD display with 6 digits H 1" LED backlit. MID version for use in commercial transactions. Self-supporting structure in metal corrosion, steel frame profiles.

MID accuracy ±0,5%. MID B+D Certificate.



Dispenser of AVIO fuel, suction pump, single hydraulic, single-side. MID.				
Accuracy		± 0,5% (MID)		
Dimensions		585X529H1359 mm		
External structure		Stainless steel		
Marking		CE-M EU Type Approval No. T10103 (MID 2014/32/UE) CE ATEX II 2G (ATEX 2014/34/UE) – LOM 04 ATEX 2056		
Flow rate	Pump	Secondary filter	Display	Code
40 l/min	RTF	Integrated	Volumetric	AT02/LC A 1 2 S M V M
40 l/min	RTF	Integrated	Comptometric	AT02/LC A 1 2 S M C M
80 l/min	RTF	External*	Volumetric	AT02/LC A 1 3 J M V M
80 l/min	RTF	External*	Comptometric	AT02/LC A 1 3 J M C M
120 l/min	RTF	External*	Volumetric	AT02/LC A 1 4 J M V M
120 l/min	RTF	External*	Comptometric	AT02/LC A 1 4 J M C M

\*To be purchased separately

Available for gasoline (Av-Gas) to 50 l/min and for kerosene (Jet-A1, JP-4, JP-5, JP-9) to 120 l/min.

## LD3 MODULE AVIOTRASPORTABLE REFUELLING



Aviotrasportable LD3 Module used for refueling little Avio gasoline engines. Made according to the latest electrical and environmental safety standards. It has a series of devices that can guarantee the quality of the product delivered and the safety against possible spills during the storage and dispensing phase.

Power supply	238 VCA RST+PHASE (100-1 kW)
Tank	AISI 304, thickness 4 mm, max capacity 2500 l
Delivery flexible hose	25 m 1"
Delivery nozzle	ATEX with filter, flow glass and earthing cable
Delivery flow rate	40÷120 l/min (depending on model)
Filtration capacity	0,5÷5 µm (depending on the used cartridge)
Display	6 digits H25 mm
Totalizer	7-digit electromechanical
Weight empty	850 Kg
Flow rate	Code
40 l/min	AT11211/040/A
80 l/min	AT11211/080/A
120 l/min	AT11211/120/A

Accessories for AT02/LC Avio fuel dispenser



GROUNDING CABLE REEL, complete with 12.5 + 1.5 - 1X6 cable and ATEX insulated clip.

Description	Code
Earth cable reel with ATEX clip	AT06216



GROUNDING SYSTEM. Enables delivery only if the vehicle is connected to the ground.

Description	Code
Grounding system	AT17117



SECONDARY FILTER AND WATER TREATMENT for AVIO JET A1 fuel. Complete with water absorbent cartridge.

Flow rate	140 l/min
Filtration power	1 µm (According to EI 1581 6th Edition)
Description	Code
Filtering unit	AT01222
Coalescer/separator cartridge	AT02222



HOUSING for secondary filter and reel.

Material	Stainless steel
Description	Code
Housing for secondary filtering device	AT00714
Housing for secondary filtering device and reel	AT00814



HOSE REEL painted carbon steel complete with 20 m hose. The dispenser is predisposed with hose reel-dispenser connection (AT14111). Complete with specific test certification according to EN 10204-3.1.

Max pressure		20 bar
Hose	Spool width	Code
Ø 1" - 20 m	390 mm	AT01322

Hose reel-dispenser connection kit consisting of 1 m of hose and connections	AT14111
--	---------

## OPTIONS FOR FUEL DISPENSER



BREAK-AWAY for delivery nozzle. Detach the hose in case of forgetting of the nozzle into the tank. It includes two safety valves that prevent fuel spillage.

Nozzle flow rate	Code
40 ÷ 70 l/min	AT49206
80 ÷ 120 l/min	AT49306
60 l/min whit RV	AT06207
180 l/min	AT21110



PRESETTING KIT composed of solenoid valves, keyboard and accessories.

Version	Dispenser type	Code
Single-phase, single side	AT02LC	AT05/S/M/02/LC
Single-phase, two side	AT02LC	AT05/S/B/02/LC
Double-phase, single side	AT15	AT05/D/M/15
Double-phase, two side	AT15	AT05/D/B/15
Alternate, single side	AT02/LC / AT15	AT05/A/M15
Alternate, two side	AT02/LC / AT15	AT05/A/B/15



X AT02



X AT15

HOSE SPRING to keep raised the hose from the floor.

Dispenser type	Code
AT02/AT02LC	AT00111
AT15	AT49406



ADDITIONAL FILTER KIT complete with taps, integrable in the dispenser AT series. Available also with water absorption and delivery block in case of excessive presence of water or dirt (> to the filter-holding capacity).

Filtering capacity	25 µm
Water storage capacity	1 l ±20 % (only absorber filter)
Flow rate	180 l/min
Dispenser type (X)*	1: AT01, 2:AT02, 3:AT02LC, 4:AT15
Description	Code
Filter kit for diesel/gecam	ATO01522/1/X*
Coalescent absorber filter kit	ATO01522/2/X*



PLUG FOR ADDITIONAL FILTER EXCLUSION.

Description	Code
Plug for additional filter exclusion	AT07409



HEATING KIT for computing head housing with ambient temperature below -20°C.

Power supply	230 VAC
Power	100 W
Description	Code
Computing head container heating kit	AT49706





ATEX HEATER KIT FOR HYDRAULIC PART with ambient temperatures below -20 ° C.

Power supply 230 VAC

Power 100 W

*Description*

*Code*

Atex heater kit for hydraulic part housing

AT01411



SINGLE PHASE INVERTER to feed the three-phase dispenser with single-phase voltage.

Power supply 230 VAC

Power max 2,2 KW

*Description*

*Code*

Inverter 230 VAC 2,2 KW

AT001917



ELECTROMECHANICAL TOTALIZER 7-digit + cable.

*Description*

*Code*

Electromechanical 7-digit

AT14006



RS232 data serial interface.

*Description*

*Code*

RS232 serial interface

AT06406



RS485 CPT/MODBUS serial interface.

*Description*

*Code*

RS485 CPT/MODBUS serial interface

AT06606



C. LOOP NUOVO PIGNONE serial interface.

*Description*

*Code*

C. Loop Nuovo Pignone serial interface

AT06506



C. LOOP GILBARCO serial interface.

*Description*

*Code*

C. Loop Gilbarco serial interface

AT29506



IFSF-LON serial interface.

*Description*

*Code*

IFSF-LON serial interface

AT04615



VOICE MODULE interface (only for multiproduct dispenser).

*Description*

*Code*

Voice module interface

AT49606



LED SIGNAL amber colored.

Description	Code
Led signal	AT20916
Led signal with IP56 enclosure	AT20916/A



RED/GREEN SIGNAL UNIT available in standard version and Ex mb, complete with cable length 1 m.

Version	Code
Standard	AT30106
Atex Ex mb 12 V	AT01113/A/12/01



100 PULSES/LITER KIT for parallel connection to management systems. Including extension on CPU.

Description	Code
100 pulses/liter	AT05108



RFID HF BADGE FORMAT preprinted and pre-coded in a progressive way. (10 vehicle + 10 driver cards including with the dispenser)

Reading distance	2÷3 cm	
Description	Code	
HF badge for driver (10 pieces)	AT04712/A	
HF badge for vehicle (10 pieces)	AT04712/V	



RFID HF BADGE FORMAT.

Reading distance	2÷3 cm	
Magnetic band	Print	Code
No	Absent	AT27807/S/N
No	1 colour	AT27807/S/C
No	In polychrome	AT27807/S/P
Yes	Absent	AT27807/M/N
Yes	1 colour	AT27807/M/C
Yes	In polychrome	AT27807/M/P



RFID HF KEYRING FORMAT only reed (2 ÷ 3 cm) with accessories. Replacing the badge format transponder.

Version	Code
Standard	AT09110
Customizable according to customer specification	AT04812

## ACCESSORIES FOR FUEL DISPENSER



FLEXIBLE CONNECTION M 1.5"/M 1.5" to simplify the dispenser installation and correct alignment errors between the inlet hose and the pump attachment.

Pump type	Code
RTF pump	AT06307



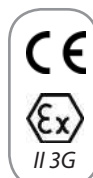
BASEMENT to simplify the dispenser installation operation.

Dispenser type	Code
AT02	ATO15104
AT02/LC	ATL17212
AT15	AT50006



HOSE REEL in stainless steel FE37 complete with Ø 1 m hose for diesel.

Hose	Spool width	Dimension	Code
Ø 1" - 8 m	150 mm	550X300H450 mm	ATO09704/08
Ø 1" - 10 m	300 mm	460X590H450 mm	ATO09704/10
Ø 1" - 15 m	300 mm	460X590H450 mm	ATO09704/15
Ø 1" - 20 m	400 mm	520X550X540 mm	ATO09704/20
Ø 1" - 25 m	400 mm	520X550X540 mm	ATO09704/25



FILTRATION UNIT designed to meet the conditions for supply of hydrocarbons harder. Easier maintenance, cleaning and filter cartridge replacing.

Filtration power		25 µm for diesel   10 µm for gasoline	
Cartridge	Product	Filtration power	Code
Separator	Diesel	25 µm	AT050/S/G
Absorbent	Diesel	25 µm	AT050/A/G
Only filtration	Diesel	25 µm	AT050/P/G
Separator	Gasoline	10 µm	AT050/S/B
Absorbent	Gasoline	10 µm	AT050/A/B*
Only filtration	Gasoline	10 µm	AT050/P/B

\* Not usable with gasoline and Bioethanol

### Accessories

Visual indicator of the presence of water	AT00914/V
Electronic indicator of the presence of water	AT00914/E
Differential manometer	AT01014
Mounting bracket	AT01114
Housing for external mounting	AT00714





WATERPROOF LEVEL GAUGE for AdBlue®, additives and diesel.		
Product accuracy	± 0,5 mm	
Data transmission (*)	RS485 1: MTS / 2: SMT / 5: ALS /6: SMV	
Float	N.1 stainless steel Ø 45 mm (WP version) N. 2 stainless steel Ø 45 mm (3G version)	
Length (**)	Max 5 m	
Protection degree	IP68	
Marking	II 3G Ex ic IIB T6 Gc (only 3G version)	
Version	Product	Code
Waterproof IP68	AdBlue®	AT08919/WP/A/X*/XXXX**
Waterproof IP68	Additive	AT08919/WP/B/X*/XXXX**
Waterproof 3G	Diesel	AT08919/3G/D/X*/XXXX**



TANK LEVEL SENSOR standard and high resolution version for measurement diesel/water and the temperature. The high resolution version is to be used in association with the densimeter AT05610.	
Accuracy	± 0,5 mm (std)   ± 0,25 mm (high res.)
Temperature accuracy	± 1°C
Serial data connection	TTL
Height	Max 290 cm
Protection degree	IP68
Description	Code
Level sensor standard version	AT05310/X/XXXX
Level sensor high resolution version	AT15610/G/XXXX



DENSITY SENSOR FOR AT15610 series level sensor. It allows the accurate and continuous measurement of density.	
Accuracy	± 2 g/l
Description	Code
Density sensor	AT05610



SERIAL INTERFACE TO CONNECT No. 1 TTL LEVEL GAUGE to the dispenser calculating head. The volume is directly visible on the dispenser display by pressing the specific button.	
Gauges and wells sensors connectable	1 + 2
Description	Code
Serial interface for 1 level gauge	AT05910/T

## SATELLITE



SATELLITE be used for the refueling on the opposite side of the delivery lane.	
Flow rate	Code
50 l/min	AT02707/050
90 l/min	AT02707/090
120 l/min	AT02707/130



# CNG FILLING SYSTEMS FOR TRAILERS



## CNG FILLING SYSTEM FOR TRAILERS

### AT30/CNG DELIVERY DISPENSER



AT30/CNG	HIGH	CAPACITY	DISPENSER	with	mass	meter,
volumetric display 6 digit H 1" LCD backlit,			start and stop buttons.			
Power supply			110-230 VAC 50/60 Hz			
Max flow rate			150 Kg/min			
Accuracy			± 0,5%			
Air pressure for pneumatic valves			250 bar			
Actuators			Pneumatic type 7÷8 bar			
Height (H)			1617 mm			
Structure and plating material			Stainless steel			
Marking			ATEX II 3G			
Description			Code			
AT30 CNG high capacity dispenser			AT30/CNG/(from codes table)			

#### Codes table

AT30	/VERSION	/LEVELS	/FLOW RATE
	CNG	1	1: 75 Kg/min
		2	2: 100 Kg/min
		3	3: 150 Kg/min



1. AT30/CNG high capacity dispenser
2. AT20611 satellite unit
3. ATO07613 operator interface with panel Q-PP1
4. AT42006 data management interface

## CNG SATELLITE UNIT



SATELLITE UNIT for the operations of tank trucks loading / unloading.	
Power supply	110-230 VAC 50/60 Hz
Max flow rate	100 Kg/min
Max nominal pressure	250 bar
Test pressure	350 bar
Height (H)	2637 mm
Structure and plating material	Stainless steel
<i>Description</i>	<i>Code</i>
Satellite unit for load	AT20611/L/HF
Satellite unit for download	AT20611/D/LF

## SEQUENTIAL MANAGEMENT REFUELLING PANEL



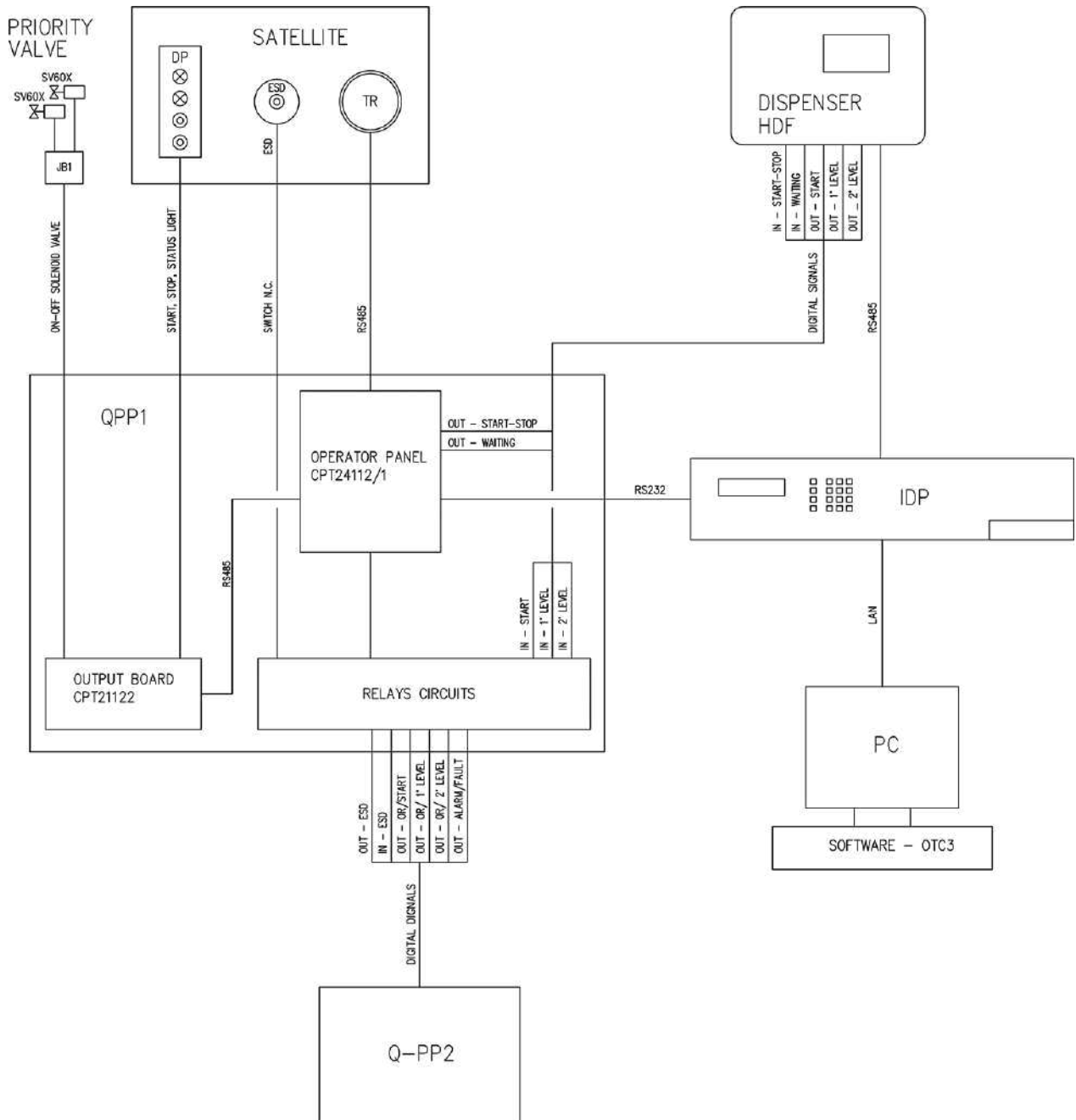
OPERATOR INTERFACE WITH PANEL Q-PP1 for filling management of tankers using 4 high capacity dispensers, 8 satellites and priority valves of a CNG station. It interfaces with the electronic heads the dispensers and the field interface for the automated management of supplies.	
Power supply	230 VAC 150 W
<i>Description</i>	<i>Code</i>
Refuelling management panel, 4 keys	ATO07613/1
Refuelling management panel, 16 keys	ATO07613/2

## MANAGEMENT INTERFACE "IDP"



DATA MANAGEMENT INTERFACE to store the list of authorized vehicles and deliveries made. Work in Stand Alone mode and is therefore able to operate also in case of absence of connection to other remote systems.	
Power supply	110-240 VAC max 100 W
Remote data management	LAN   RS232   GSM (option)
<i>Computing head connection</i>	<i>Code</i>
C. Loop 4 computing heads	AT42006/A/F
C. Loop 8 computing heads	AT42006/B/F
RS485 8 computing heads	AT42006/C/F
2 RS485 16 computing heads	AT42006/D/F
1 RS232 - 1 RS485	AT42006/F/F
3 RS232	AT42006/G/F

**Logic diagram methane loading automation**





# CNG FILLING SYSTEM FOR FLEET





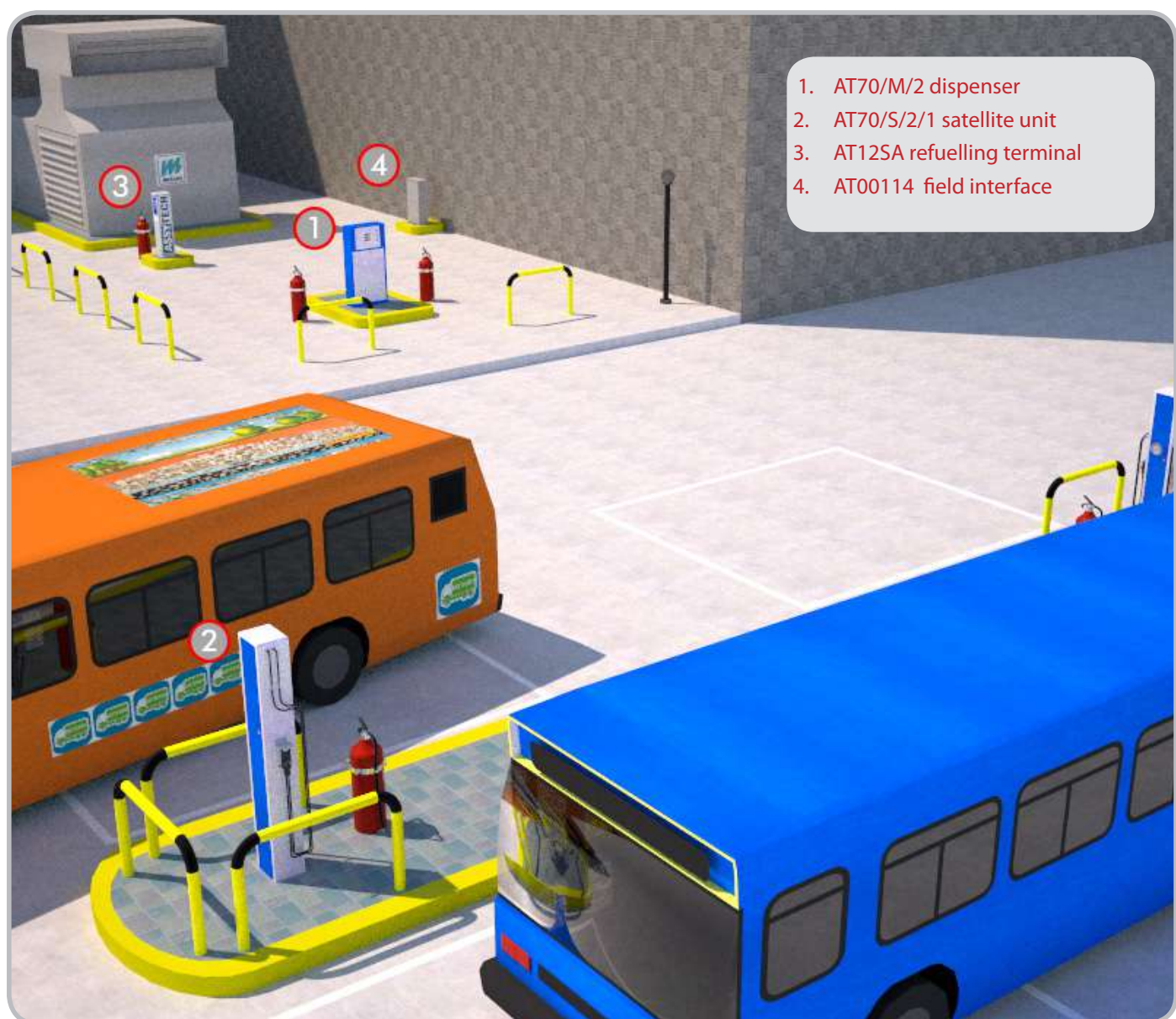
## CNG FILLING SYSTEM FOR FLEET

### AT70 CNG DISPENSER



AT70 CNG DISPENSER with mass meter, volumetric display 6 digit H 1 " LCD backlit, start and stop buttons.

Power supply	230 VAC 50/60 Hz
Max flow rate	80 Kg/min
Accuracy	± 0,5%
Air pressure for pneumatic valves	250 bar
Actuators	Pneumatic type 7÷8 bar
Height (H)	1617 mm
Structure and plating material	Pre-galvanized steel painted
Marking	ATEX II 3G
<i>Description</i>	<i>Code</i>
AT70 CNG high capacity dispenser	AT70/M/2



## CNG SATELLITE UNIT



SATELLITE UNIT for the operations of tank trucks loading / unloading.

Power supply	24 VCC
Max flow rate	80 Kg/min
Max normal pressure	250 bar
Actuators	Pneumatic type 7÷8 bar
Height (H)	2637 mm
Flexible hose	1/2"
Spindle	NGV1
Structure and plating material	Pre-galvanized steel painted
Marking	ATEX II 3G
<i>Description</i>	<i>Code</i>
Satellite unit for load	AT70/S/2/1

## FIELD MANAGEMENT



AT12SA outdoor terminal for CNG cars refuelling in sequential mode.

Power supply	230 VAC +10%-15% 50/60 Hz
Max n. of satellites	2
Max points of refuelling	4
Max n. of measuring groups	2
<i>Description</i>	<i>Code</i>
AT12SA outdoor terminal for refuelling	AT12SA/1/4



FIELD INTERFACE to manage reservations of more than 8 satellites. It manages the booking button, the status light, and the delivery enable solenoid valve.

Power supply	230 VAC max 200 W	
<i>N° satellites</i>	<i>Version</i>	<i>Code</i>
8+8 satellites	Single	AT00114/08/S
8+8 satellites	Double	AT00114/08/D
16+16 satellites	Single	AT00114/16/S
16+16 satellites	Double	AT00114/16/D

## MANAGEMENT SOFTWARE



MANAGEMENT SOFTWARE for processing and displaying of data of AT12 systems.

<i>Version</i>	<i>Code</i>
Server Full for management multiple plants	ATS01812/SFL
Server Full for management one plants	ATS01812/SLT
Client	ATS01812/CFL



# PRODUCT UNLOADING METERS





## PRODUCT UNLOADING METERS

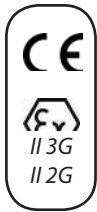
### HIGH CAPACITY PRESSURE METER



HIGH FLOW PRESSURE METER without printer. It needs tanker with pump.	
Flow rate	100÷800 l/min
Quick coupler	3"
Description	Code
High flow pressure meter with mechanical head	AT16808/M
High flow pressure meter with electronic head	AT16808/E

Temperature compensation kit	AT05311
Serial data computing head CPTH02 converter kit	AT10516/K

### AT80 FUEL DISPENSER



AT80 HIGH CAPACITY FUEL DISPENSER for the pumping and distribution of diesel, gasoline, aviation or JP8. Mass or volumetric meter, OIML R117-1 certificate, complete with electronic head with LCD display, a discharge product consent valve, electric pumps group and roller reel.

Nominal flow rate	250 ÷ 750 l/min (depending of model)
Description	Code
High capacity fuel dispenser	AT80/(from codes table)

#### Codes table

AT80	/FLOW RATE	/METER	/VERSION	/REEL	/FILTER	/PRE-SET	/DISPLAY	/PRODUCT
	/0250 l/min /0500 l/min /0750 l/min	M: mass gravity P: mass pressure /V: volumetric gravity /Z: volumetric pressure	S: submersible pump A: suction pump	/N: absent /P: present	N: absent S: separator A: absorber	N: no S: yes	C: contometric M: mass V: volumetric	G: diesel B: gasoline A: avio J: JP8

#### Examples of application



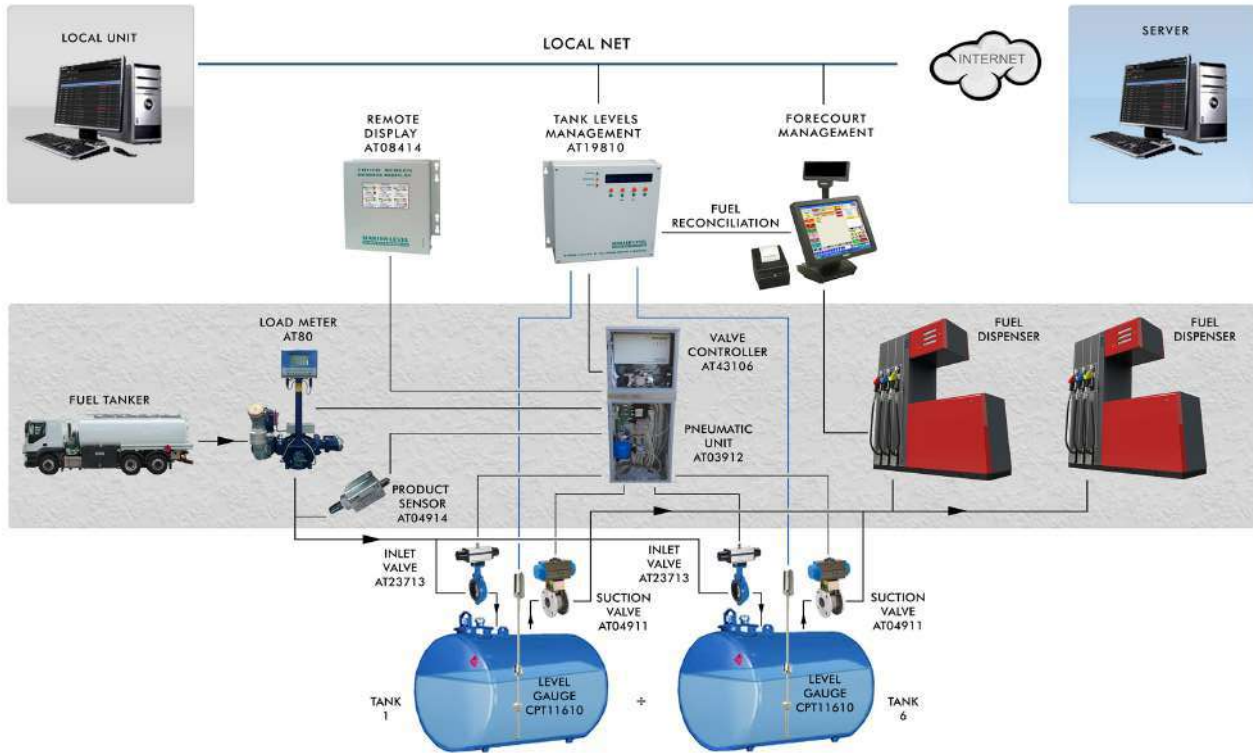
Drop/pressure download with AT04914 product quality sensor



AT16808/E pressure meter



**Product loading/unload automation functional diagraming**





# CENTRALIZED FUEL PUMPS



## CENTRALIZED FUEL PUMPS

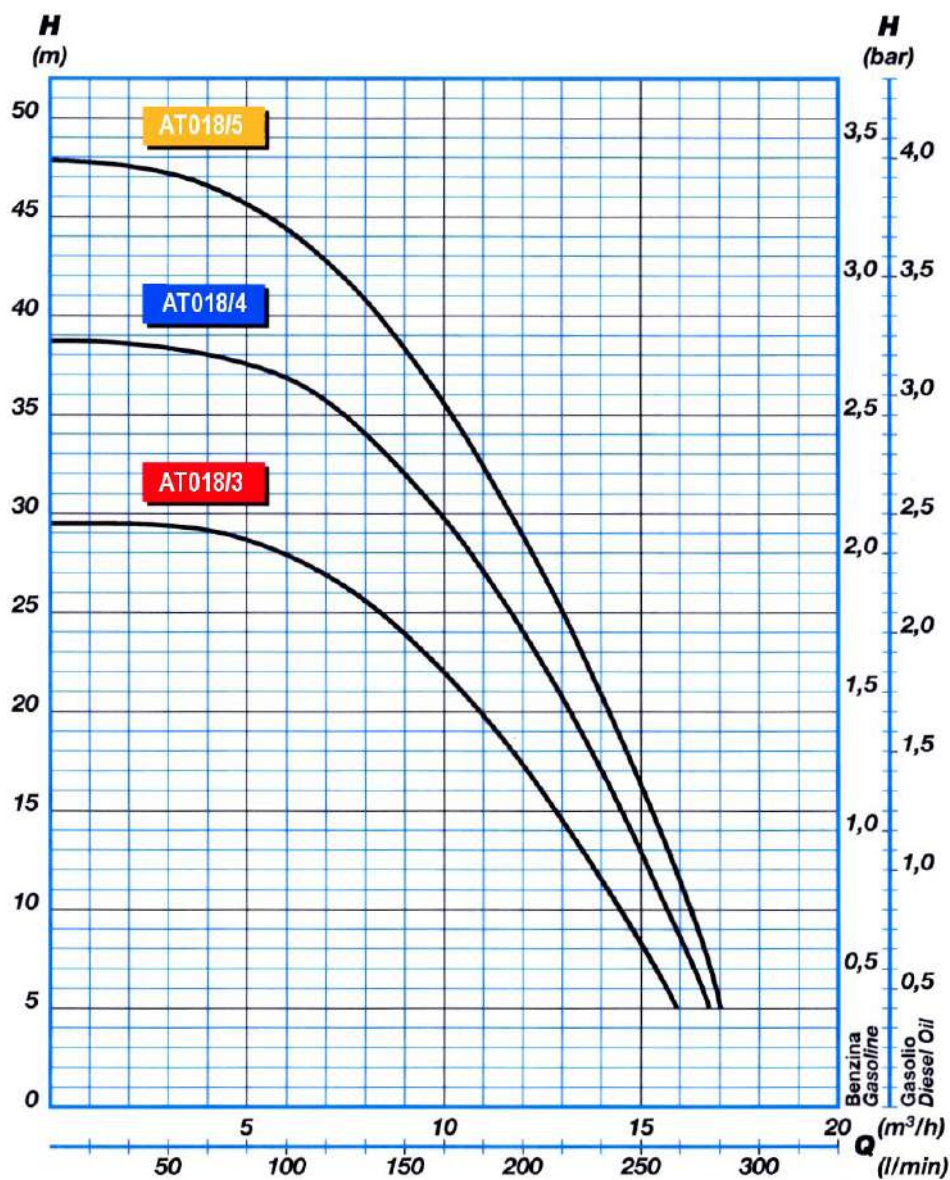
### SUBMERSIBLE PUMPS



PUMPING UNIT WITH SUBMERSIBLE PUMP for fuel delivery, complete with leak detection valve.

Lungth		XXX cm (000= to assemble)	
Voltage		400 V / 50 Hz	
Impellers	HP	KW	Code
3	1,5	1,1	AT018/3/XXX
4	2	1,5	AT018/4/XXX
5	2,5	1,8	AT018/5/XXX

*Submersible pump operational curves*





## Accessories for submersible pumps



FITTING 4".

Length	Code
150 mm	AT04307
200 mm	AT17013
300 mm	AT17113



CHECK VALVE for submersible pump with the balancing hole F/F 2".

Description	Code
Check valve	AT04407



PRESSURE LIMITER VALVE with F-F 3/4", 1" and 1 1/2" connection. Indispensable to 4/5 impellers pumps.

Connection	Calibration	Code
F/F 3/4"	4 bar	AT04507/034/04
F/F 1"	2 bar	AT04507/100/02
F/F 1" 1/2	2 bar	AT04507/112/02
F/F 1"	2 bar	AT04507/200/02



DOUBLE CLOSING SAFETY VALVE to be installed on dispenser inlet.

Connection	1" 1/2 + 2" X 1" 1/2
Description	Code
Double closing safety valve	AT09810



MEMBRANE HYDROPNEUMATIC ACCUMULATOR. Delete, on long distances, problems caused by pressure surges with 4 and 5 impellers pumps.

Max pressure	300 bar
Nitrogen volume	0,5 / 0,7 liter (depending of the model)
Connection	M 18X1.5
Description	Code
Membrane accumulator with nitrogen volume 0.5 l	AT09210/0.5
Membrane accumultaore with nitrogen volume 0.7 l	AT09210/0.7

## PUMPING GROUP



PUMPING GROUP installed on a special skid, made with 2 pumps and everything needed to ensure adequate pressure and flow rate necessary to power up to 4 dispensers of 90/120 l/min used for the refuelling of vehicles, such as buses, trucks, etc.

Power supply	400 VCA
Description	Code
Self-priming pumping group	AT22510



## CONTROLLER FOR CENTRALIZED PUMPS



PUMP CONTROLLER to control the proper functioning of the submersible pumps or remote pumps, to optimize the flow and the automatically exchange in case of anomalies. It also allows triggering devices such as soft start and frequency regulators.

Power supply	100-240 VAC 50/60 Hz	
Power	50/60 Hz	
Nozzles inputs	8	8+8
Min. level inputs	2÷4	2÷4
Leak sensors inputs	2	-
Piloting pumps	1÷4	2÷4
Serial connection	GSM/GPRS (optional)	
<i>Description</i>		<i>Code</i>
Pump controller for 8 nozzles		AT01710/08
Pump controller for 16 nozzles		AT01710/16

### Options for controller



SOFT START MOTOR to be installed in the electrical panel. It starts the motor of the pump gradually avoiding water hammer and reducing consumption of the drive belts.

Power	0,75÷3 KW	
Max operating voltage	480 VCA 50/60 Hz	
<i>Description</i>		<i>Code</i>
Soft Start motor		AT039



GSM/GPRS MODEM for data and alarms management via GSM connection.

<i>Description</i>		<i>Code</i>
GSM/GPRS modem complete of 900÷1800 MHz antenna with magnetic base		AT06706



ELECTRO ACOUSTIC SIGNAL DEVICE FOR OUTDOOR.

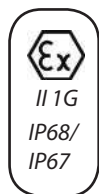
<i>Description</i>		<i>Code</i>
Remote alarm for outdoor		AT15507

## SENSORS FOR THE MANAGEMENT OF CONTROLLERS FOR SUBMERSIBLE PUMPS



FLOAT LEVEL SWITCH for tanks.

Max switching voltage	28,8 VCC	
Max switching current	0,5 A	
Diameter	45 mm	
Connection	1/4"	
Cable	Shielded PVC, std length 5 m	
Output function	Switch	
Protection degree	IP68 (Cable output IP67)	
Marking	ATEX II 1G Ex ma IIC T6 Ga (Zona 0)	
<i>Description</i>		<i>Code</i>
Float level switch		CPTL07/S/3/1/00/008/05



LIQUOR PRESENCE SENSOR FOR WELLS TANKS.		
Dimensions	Ø 60 mm length 500 mm	
Cable	Shielded PVC, std length 5 m	
Protection degree	IP68 (Cable output IP67)	
Marking	ATEX II 1G Ex ma IIC T6 Ga	
Product	Output	Code
Water/gasoline/diesel	On/off	CPTL07/S/3/D/00/050/05
Water/gasoline/diesel	Smart	CPTL07/Z/3/D/00/050/05
Discriminating	On/off	CPTL07/B/3/E/15/050/05
Discriminating	Smart	CPTL07/Z/3/E/15/050/05



PROTECTION CIRCUIT FOR Ex m DEVICES, to be used with the level switches, with the purpose of limiting the voltage and current within the specified limits.		
Use	Zone 0 and 1	
Description	Code	
Protection circuit for Ex m devices	AT17511/A	



\*\* Requires the barrier for intrinsically safe sensors AT26302/S code

LEAK DETECTION SENSOR used with the Pump Controller series control unit. It blocks the start of the pump in case of detection of leaks in the pipe. HEAVY DUTY model.		
Max pressure	12 bar   20 bar (for oil)	
Body material	Anodized aluminum / Stainless steel (per AdBlue®)	
Protection degree	IP65	
Marking	S.A. for industrial use (Zone 0*) ATEX II 3 GD EEx e T6 (Zone 2)	
Product	Setting	Code
AdBlue®	0,5÷5 bar (std 1 bar)	AT00810/3/00
Diesel/Gasoline	0,5÷5 bar (std 1 bar)	AT00910/3/00
Oil	5÷15 bar (std 5 bar)	AT11712/5/00

## ACCESSORIES FOR PUMPS SENSORS



SENSORS CABLE CONNECTION shielded, double insulation, for underground use.		
Length (XXX)	100 m or multiple	
Sensors output	Dimensions	Code
On/off	2X1 mm	AT38606/XXX
BUS RS485	4X1 mm	AT08604/XXX



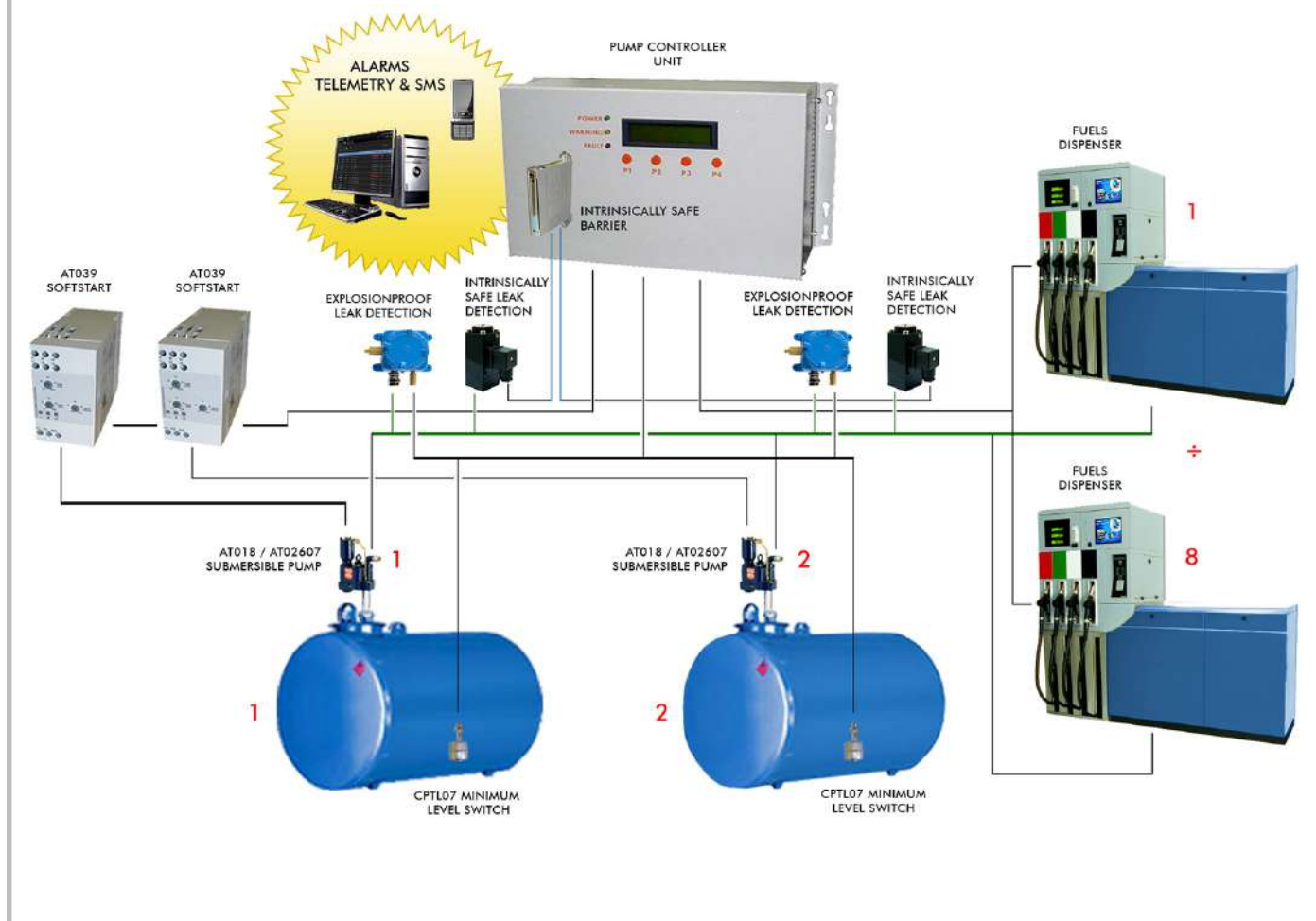
SENSORS CONNECTION KIT equipped with joint locking, connection box and mounting accessories.		
Protection degree	IP68	
Marking	ATEX II 2G Ex d II C T6	
Description	Code	
Sensor connection kit, standard	AT043/1	
Sensor connection kit, with hose 1 m	AT043/2	
Sensor connection kit, without blocking joint	AT043/3	



RESIN for blocking joint.

Quantity	Code
300 g	AT00908
1000 g	AT02910

**Centralized pump controller functional diagram**

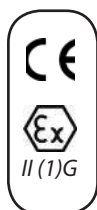


# **EQUIPMENT FOR SUCTION/ DISCHARGE MANAGEMENT OF FUEL TANKS**





## VALVES CONTROLLER



VALVE CONTROLLER for management, via solenoid valves and connection to the switches of minimum level or to the serial line, in automatic mode, the suction of the product by a series of fuel tanks (1 ÷ 8).

Power supply	100-240 VAC 50/60 Hz 24 VA	
Marking	ATEX II (1)G [Ex ia] IIC T4 (intrinsically safety version)	
Outputs	Version	Code
8	Standard	AT43106/08/S
16 (24 VDC)	Standard	AT43106/16/S

### Accessories for valves controller



ELECTRICAL ACOUSTIC SIGNAL DEVICE FOR OUTDOOR. The alarm is switched off only when the alarm is reset.

Description	Code
Remote alarm for outdoor	AT15507



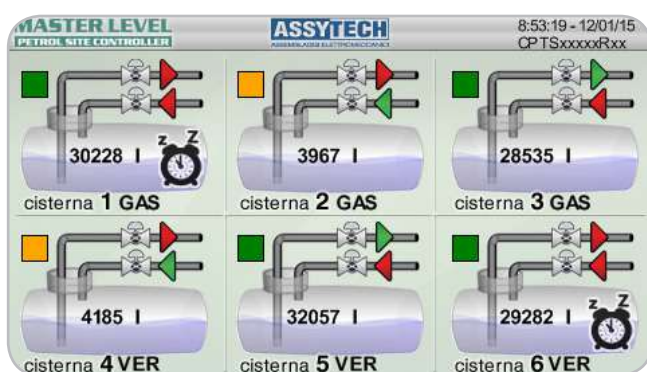
Wall version



Desktop version

REMOTE GRAPHIC DISPLAY can be connected to the Valve Controller unit. It displays the status of the inlet and suction valves, the tanks stocks, the switching thresholds and the alarms.

Data input	Function	Version	Code
RS232	Viewer	Desktop	AT08414/1/V/T
RS232	Viewer	Wall	AT08414/1/V/P
RS485	Viewer	Desktop	AT08414/2/V/T
RS485	Viewer	Wall	AT08414/2/V/P



Graphic operator display  
main screen

Tank details





## SENSORS



FUEL QUALITY SENSOR. Directly and simultaneously it measures the fuel viscosity, density, dielectric constant and temperature.

Power supply	12 VDC
Max consumption	100 mA
Operating temperature	-40 ÷ +125°C (accuracy ± 0,1°C)
Density	0,65 ÷ 1,5 gm/cc (accuracy ± 1% of the value)
Viscosity (dynamics)	0,5 ÷ 50 mPa-s (cP) (accuracy ± 2% of the value)
Connection	M14 X 1.5
Max operating pressure	25 bar
Cable length *)	XX m (standard 3 m)
Marking	ATEX II 1G Ex ma IIC
<i>Version</i>	<i>Code</i>
Fuel quality sensor with product identification	AT04914/XX*



FLOAT LEVEL SWITCH.

Max switching voltage	28,8 VDC
Max switching current	0,5 A
Diameter	45 mm
Connection	1/4"
Cable	PVC shielded, standard length 5 m
Output functions	Switch
Protection degree	IP68 (output cable IP67)
Marking	ATEX II 1G Ex ma IIC T6 Ga
<i>Description</i>	<i>Code</i>
Float level switch	CPTL07/S/3/1/00/008/05

## SOLENOID VALVES



SUCTION/DELIVERY SOLENOID VALVE.

Flow rate			280 Kv	
Pressure			Suction: 0÷16 bar; Delivery: 0,2÷16 bar	
Seals			Viton (FKM)	
Marking			ATEX II 2G Ex d IIC T6 Gb	
Dimensions	Power supply	Type	Version	Code
G 1" 1/2	24 VCA	Suction/delivery	ATEX (IP65)	AT09610/1.5/024/D
G 1" 1/2	24 VCA	Delivery	ATEX (IP67)	AT05818/1.5/024/D
G 1" 1/2	230 VCA	Suction/delivery	ATEX (IP65)	AT09610/1.5/230/D
G 1" 1/2	230 VCA	Delivery	ATEX (IP67)	AT05818/1.5/230/D
G 1" 1/2	24 VCA	Suction/delivery	IP67	AT09610/1.5/024/I
G 1" 1/2	24 VCA	Delivery	IP67	AT05818/1.5/024/I
G 1" 1/2	230 VCA	Suction/delivery	IP67	AT09610/1.5/230/I
G 1" 1/2	230 VCA	Delivery	IP67	AT05818/1.5/230/I

## MOTORIZED VALVES



MOTORIZED VALVE with electric actuator complete with ball valve.			
Power supply		24 VAC	
Consumption (in operation mode)		1,8 A	
Protection degree		IP65 (Atex version) ; IP67 (Waterproof version)	
Dimensions	Connection	Version	Code
G 1" 1/2	F/F	ATEX	AT13610/1.5/1/A
G 1" 1/2	F/F	IP67	AT13610/1.5/1/I
G 1" 1/2	PN16	ATEX	AT13610/1.5/2/A
G 1" 1/2	PN16	IP67	AT13610/1.5/2/I
G 2"	F/F	ATEX	AT13610/2.0/1/A
G 2"	F/F	IP67	AT13610/2.0/1/I
G 2"	PN16	ATEX	AT13610/2.0/2/A
G 2"	PN16	IP67	AT13610/2.0/2/I

### Motorized valves example of application



## PNEUMATIC VALVES



Stainless steel (flange)

FLANGE BALL PNEUMATIC VALVE, SINGLE EFFECT (with spring return) AND DOUBLE EFFECT (maintains the position previously set). You can manually control by specific AT05011 lever.

Operating pressure	6÷8 bar
Operating temperature	-10 ÷ +40°C / -40 ÷ +40°C (extended)
Effect (X1)	S= Single; D= Double E= Single with extended temperature F= Double with extended temperature
Body material (X2)	F= Carbon steel ASTM A105 I= Stainless steel AISI 304
Marking	ATEX Ex II 2G/D c T4 (valve)/c T6 (actuator)
Valve dimensions	Code
1" 1/2	AT04911/1.5/X1/X2
2"	AT04911/2.0/X1/X2
3"	AT04911/3.0/X1/X2
4"	AT04911/4.0/X1/X2



Single effect (wafer)



Double effect (wafer)

BUTTERFLY PNEUMATIC VALVE SINGLE AND DOUBLE EFFECT for loading product. You can manually control by specific AT05011 lever.

Operating pressure	5 bar (max 8 bar)
Operating pressure (flanges)	PN 16 bar
Operating temperature	-10 ÷ +50°C
Standard flange	PN 10 / PN 16 / ANSI 150
Effect (X1)	S= Single / D= Double / O= Single dosing
Version (X2)	S= Standard / A= ATEX (Directive 2014/34/EU)
Marking	ATEX Ex II 2GD c TX (/A version only)
Valve dimensions	Code
1" 1/2	AT23713/1.5/X1/X2
2"	AT23713/2.0/X1/X2
3"	AT23713/3.0/X1/X2
4"	AT23713/4.0/X1/X2



MANUAL CONTROL KIT to opening the valve manually. It is only possible with double-acting actuator and without resting pressure.

Valve dimensions	Code
1" 1/2	AT05011/1.5
2"	AT05011/2.0
3"	AT05011/3.0
4"	AT05011/4.0



LIMIT SWITCH FOR PNEUMATIC VALVES composed of CPTI07/NA/03 compact reed switch, AT10912 magnetic unit and fixing bracket.

Marking	ATEX II 2G Ex mb IIC T6 Gb
Contact	Code
Normally open contact (NO)	AT10612/NA/10
Normally close contact (NC)	AT10612/NC/10
Protection circuit for Ex m devices	AT17511/A



*Pneumatic valves example of application*





## PNEUMATIC VALVES CONTROLLER



Manual version



Modbus version  
(with integrated Valve Controller)



II 3G  
IP44

PNEUMATIC COMMAND designed for the automation of the opening/closing of the shut-off valves of the tanks present on service stations, especially for those unattended (Ghost). The pneumatic command associated with a valves management system, such as the Valve Controller (AT43106 code), allows the automatic closing of the valve related to a low level tank and the opening of the valve of a tank with sufficient product level..

Power supply	230 VAC 20-200 W
Solenoid valves power supply	24 VCC 1,5 VA
Operating pressure	6 ÷ 7 bar (9 bar max)
Compressor flow rate (if present)	37 l/min
Operating temperature	-10 ÷ +50°C
Command type (X1)	M= Manual for single effect valve actuator N= Manual for double effect valve actuator S= Assisted for single effect valve actuator T= Assisted for double effect valve actuator B= Modbus for single effect valve actuator predisposed for Valve Controller AT43106 C= Modbus for double effect valve actuator predisposed for Valve Controller AT43106 D= Modbus for single effect valve actuator E= Modbus for double effect valve actuator
Compressor (X2)	C= Present / S= Absent
No. of valves actuators (X3)	02÷16 (08 for Modbus version)
Protection degree	IP44
Marking	ATEX II 3 G T3
Description	Code
Pneumatic valves command unit	AT03912/X1/X2/X3

### Pneumatic valves controller example of application



PIPES/TANKS  
LEAKS CONTROL

CATHODIC PROTECTION  
TANKS

PNEUMATIC VALVES  
COMMAND

## Accessories for pneumatic valves controller



TANK LEVELS AND ALARMS MONITORING CONTROL UNIT for 8 intrinsic safety Master Level series gauges.

Power supply	100-240 VAC 50/60 Hz		
No. of connectables level gauges	8		
No. of connectable smart sensors	16 (smart), 4/8 (on/off)		
Marking	II (1) G [Ex ia] IIC T4		
Type	Data output	Alarms	Code
Display and keyboard	RS232/RS458	4 in/4 out	AT19810/B/N/04/04
Display and keyboard	RS232/RS485	8 in/8 out	AT19810/B/N/08/08
Display and keyboard	Radio wireless	4 in/4 out	AT19810/B/R/04/04
Display and keyboard	Radio wireless	8 in/8 out	AT19810/B/R/08/08



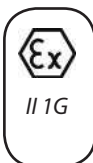
REMOTE GRAPHIC DISPLAY can be connected to the Valve Controller unit. It displays the status of the inlet and suction valves, the tanks stocks, the switching thresholds and the alarms.

Data input	Function	Version	Code
RS485	Valves command	Desktop	AT08414/2/M/T
RS485	Valves command	Wall	AT08414/2/M/P
RS485	Viewer	Desktop	AT08414/2/V/T
RS485	Viewer	Wall	AT08414/2/V/P



ENABLING DEVICE FOR LOADING TANK START PROCEDURE. Complete with fixing kit.

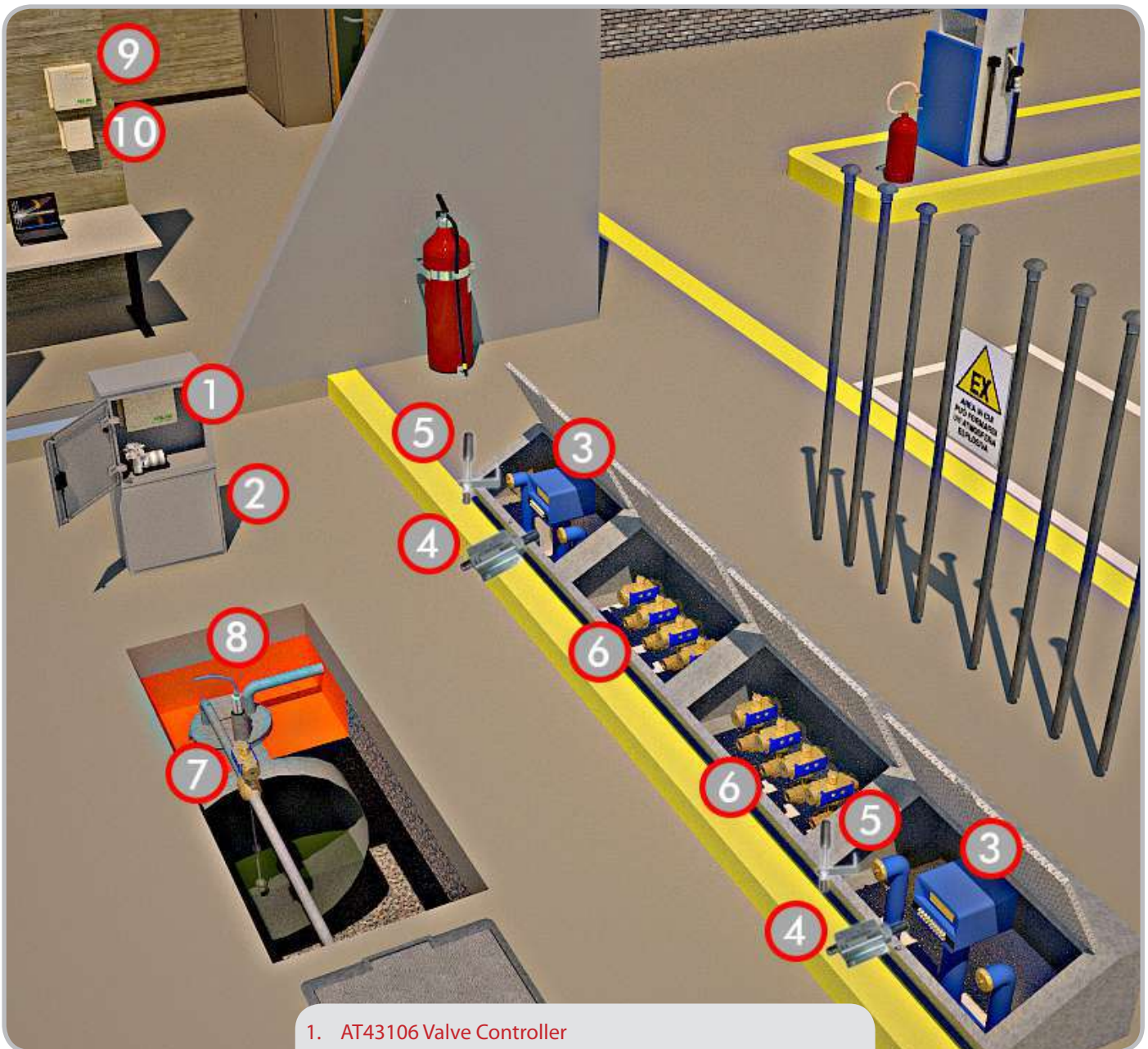
Max switching voltage	28,8 VDC		
Max switching current	0,5 A		
Cable	PVC shielded, standard length 5 m		
Output functions	Switch/Commutation		
Protection degree	IP68 (output cable IP67)		
Marking	ATEX II 1G Ex ma IIC T6 Ga		
Description			Code
Enabling device for loading tank start procedure			AT08010



FUEL QUALITY SENSOR. Directly and simultaneously it measures the fuel viscosity, density, dielectric constant and temperature.

Power supply	12 VCC		
Max consumption	100 mA		
Operating temperature	-40 ÷ +125°C (accuracy ± 0,1°C)		
Density	0,65 ÷ 1,5 gm/cc (accuracy ± 1% of the value)		
Viscosity (dynamics)	0,5 ÷ 50 mPa-s (cP) (accuracy ± 2% of the value)		
Connection	M14 X 1.5		
Max operating pressure	25 bar		
Cable length *)	XX m (standard 3 m)		
Marking	ATEX II 1G Ex ma IIC		
Version			Code
Fuel quality sensor with product identification			AT04914/XX*

**AT03912/B-C pneumatic command unit managed by Valve Controller example of application**



1. AT43106 Valve Controller
2. AT03912 valve command unit
3. AT16808 load meter
4. AT04914 fuel quality sensor
5. AT08010 enabling device for load tank starting procedure
6. AT23713 butterfly load valve
7. AT04911 ball suction valve
8. CPT11610 level gauge
9. AT19810 levels and alarms monitoring control unit
10. AT08414 graphic remote display



**AT03912/D-E unit with remote manual command example of application**



1. AT03912 valve command unit
2. AT08414 graphic remote display
3. AT23713 butterfly load valve
4. AT04911 ball suction valve
5. AT16808 electronic load meter

Main view of the user interface

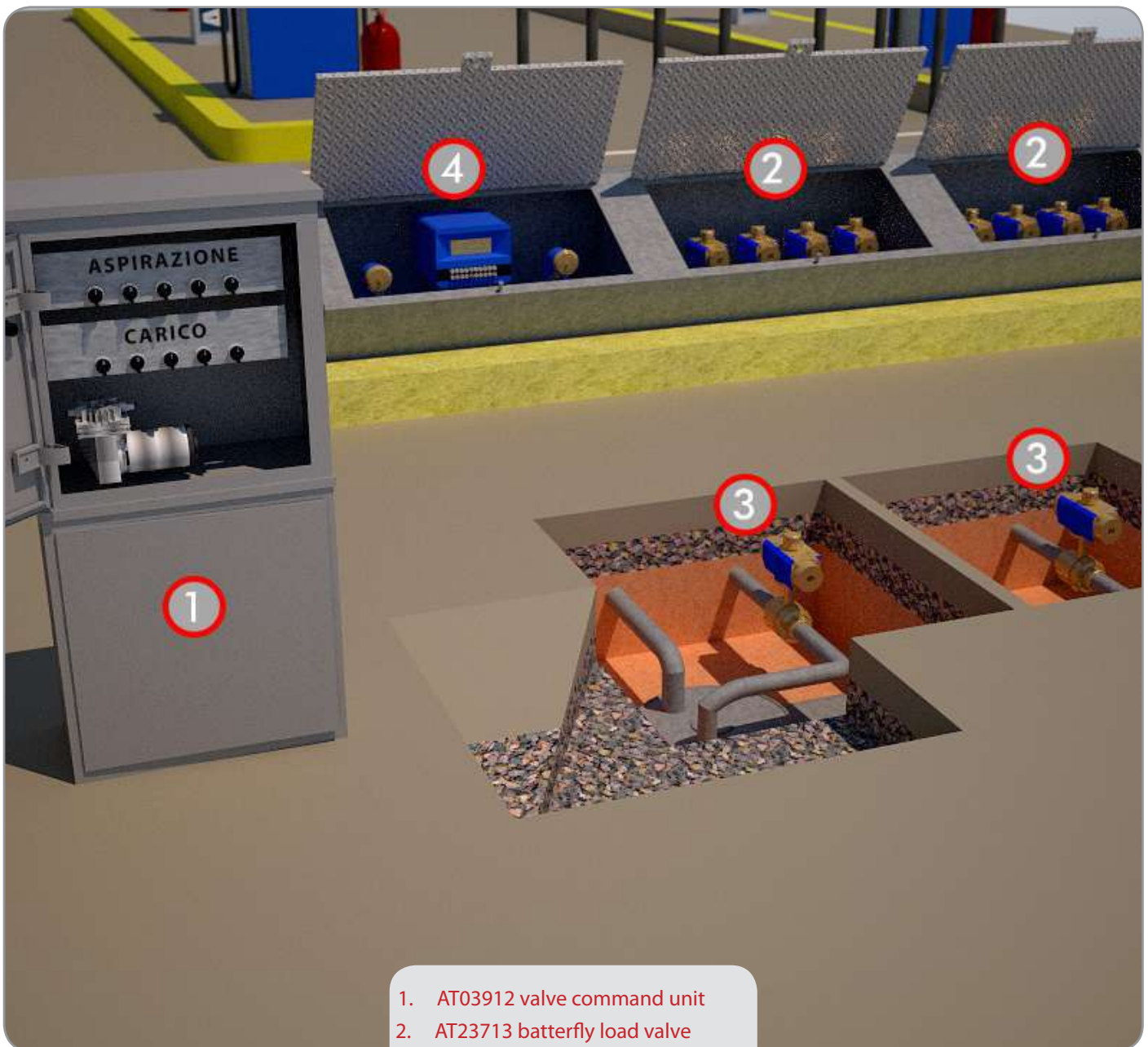
MASTER LEVEL PETROL SITE CONTROLLER			
ASSYTECH			
11:28:19 CPTS03615R00			
CIS. 1: GAS	CIS. 2: GAS	CIS. 3: GAS	CIS. 4: GAS
CIS. 5: VER	CIS. 6: VER	CIS. 7: VER	CIS. 8: VER

Valve activation

MASTER LEVEL PETROL SITE CONTROLLER	
ASSYTECH	
11:28:34 CPTS03615R00	
ATTIVAZIONE RITARDATA	
ATTIVAZIONE IMMEDIATA	
ASPIRAZIONE	
CARICO	
ORA 0 : 0	
CISTERNA 1 GAS	



**AT03912/M-N manual pneumatic command unit example of application**



1. AT03912 valve command unit
2. AT23713 butterfly load valve
3. AT04911 ball suction valve
4. AT16808 electronic load meter

[illegible]

# ADBLUE® DISPENSERS



*AdBlue® is a registered trademark of VDA (Verband der Automobilindustrie)*

## **ADBLUE® TO REDUCE VEHICLES POLLUTANT EMISSIONS**

The Euro 5 has led to the introduction of AdBlue® (1) for trucks and buses. Meanwhile, due to increasingly stringent regulations in Europe, most newly registered heavy duty vehicles have been equipped with SCR systems (2).

Since September 1, 2015, all new cars sold in Europe must be Euro 6.

The obligation took effect in September 2014 for new approvals, while a year was left to builders to update all models.

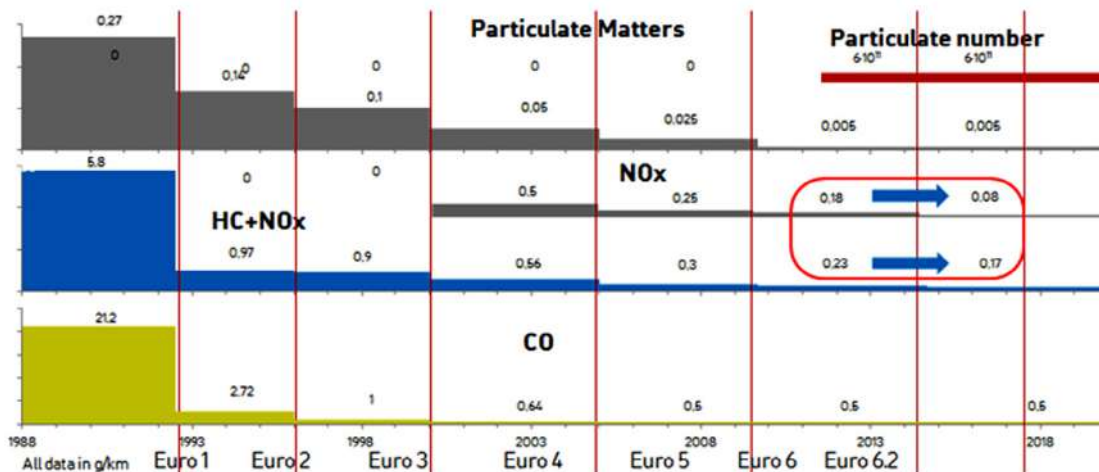
European regulations have for the Euro 6 more limits for CO<sub>2</sub> emissions and therefore for consumption, but it is especially severe with nitrogen oxide emissions, the NO<sub>x</sub> of which are generous producers diesel engines.

The new Euro 6 diesel, in addition to the particle filter or Fap required by the Euro 5, have traps for NO<sub>x</sub> or, in the case of larger engines, an exhaust gas treatment system using an urea-based additive. Euro 6 also applies to new models of LV diesel vehicles under 3.5 tons (3) and therefore many cars, vans and commercial vehicles will have a separate tank for AdBlue®.

This tank will have standardized manifold according to ISO 22241-4.



*Deadlines for the reduction of diesel engine emissions in Europe*



Assytech has been producing AdBlue® dispensers for years with magnetic meters (no moving parts and therefore unwearable) capable to supply heavy vehicles with standardized nozzles and up to 40 l/min. On these dispensers it has been possible refuelling cars and other light vehicles with approved nozzles and delivery up to 10 l/min according to the reference standard ISO 22241-5. The opening of these nozzles is ensured by means of special devices to avoid filling tanks with products other than AdBlue®.



*Elaflex ZVA AdBlue® LV automatic nozzle for vehicle and vans*

(1) Trademark registered by the German Automotive Industry Association (VDA) for urea 32.5% ISO 22241 / DIN 70070.

Synonyms: Acrylic Urea Solution "AUS 32", Diesel Exhaust Fluid "DEF" (USA), Automotive Liquid Reducing Agent "ARLA32" (Brazil)

(2) Selective Catalytic Reduction, a system to minimize nitrogen oxide emissions by injecting urea solution into the diesel exhaust gas

(3) LV vehicle with a weight of less than 3.5 tonnes



## AT30/F INDUSTRIAL ADBLUE® DISPENSER

AT30/F series AdBlue® dispenser, fleets version, single or double hydraulic, arranged for submersible pump, volumetric version with display on one side (for nozzle), electronic totalizer, heater, filter and solenoid valve. With industrial meter for private use, Elaflex AdBlue® hose reel and ZVA AdBlue®HV 40 l/min Elaflex automatic nozzle. Stainless steel structure. Accuracy  $\pm 1,5\%$ . EU Declaration of Conformity.

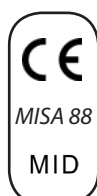


AdBlue® dispenser, single or double hydraulic, arranged for submersible pump, display on one side (for nozzle), single-side, industrial meter for private use, ZVA AdBlue®HV Elaflex nozzle. Hose reel and heater.

Accuracy	$\pm 1,5\%$ (industrial)		
Dimensions	515X600H1650 mm		
Structure material	Acciaio INOX		
Flow rate	Hydraulic	Version	Code
40 l/min	Single	Single-side	AT30 F 8 2 0 0 0 A N N N M V I
40/40 l/min	Double	Two-side	AT30 F 8 2 2 0 0 A N N B V I

## AT02LC/U SERIES METROLOGICAL ADBLUE® DISPENSER

AT02LC/U series AdBlue® dispenser, MID version for retail use, single hydraulic or alternate on two nozzle, arranged for submersible pump, comptometric version with single-side or two-side display, electronic totalizer, hose-reel, heater, filter and solenoid valve. With electronical meter without moving parts, Elaflex AdBlue® flexible hose, ZVA AdBlue® LV 10 l/min or HV 40 l/min Elaflex nozzle. Stainless steel structure. MID accuracy  $\pm 0,5\%$ . MID B+D Certificate.



AdBlue® dispenser, single or alternate hydraulic, arranged for submersible pump, comptometric, single-side or two-side display, MID electronical meter without moving parts, Elaflex nozzle. Heater.

Accuracy	$\pm 0,5\%$ (MID)			
Dimensions	660X448H1523 mm			
Structure material	Stainless steel AISI 304			
Marking	CE-M EU Type Approval No. T10821 (MID 2014/32/EU)			
Flow rate	Hydraulic	Version	Display	Code
10 l/min	Single	Two-side	Comptometric	AT02 LCU 1 1 0 A N B C M
40 l/min	Single	Two-side	Comptometric	AT02 LCU 1 2 0 A N B C M
10/40 l/min	Alternate*	Two-side	Comptometric	AT02 LCU 4 1 2 A N B C M

\* Note: model with refuelling point for heavy duty vehicles (HV) and light vehicles (LV)

## AT00321 SERIES METROLOGICAL ADBLUE® DISPENSER

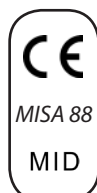
AT00321 series AdBlue® dispenser, MID version for retail use, equipped with husing for storage drum from 25 to 200 liters, self-priming pump including pressure switch, non-intrusive minimum level sensor and electrical protection. Optionally they can be equipped with ticket printer, delivery liters presetting kit, Elaflex ZVA nozzle for AdBlue®, additional heater for temperatures  $< -10^{\circ}\text{C}$  and batteries for powerless operation.



Power supply (*)	1: 230 VAC / 2: 24 VDC	
Accuracy	$\pm 0,5\%$ (MID)	
Delivery flow rate	5 ÷ 15 l/min	
Autonomy with batteries	200 l	
Applicable drum capacity	25 ÷ 200 l (1000 l optional)	
Hose length	2,5 m	
Drum capacity	Power supply	Code
60 ÷ 200 l	230 VAC	AT00321/1/1/0/0/0
1000 l	230 VAC	AT00321/2/1/0/0/0

## **AT30/U METROLOGICAL ADBLUE® DISPENSER**

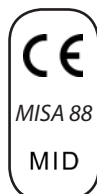
AT30/U series AdBlue® dispenser, MID version for retail use, single hydraulic, double or alternate on two nozzle, arranged for submersible pump, comptometric version with one side display for each nozzle, electronic totalizer, hose-reel and heater. With electronic meter without moving parts, Elaflex AdBlue® flexible hose, ZVA AdBlue® LV 10 l/min or HV 40 l/min Elaflex nozzle. Stainless steel structure. MID accuracy  $\pm 0,5\%$ . MID B+D Certificate.



AdBlue® dispenser, single, double or alternate hydraulic, arranged for submersible pump, one side display for each nozzle, MID electronic meter without moving parts, Elaflex. Hose reel and heater.				
Accuracy		$\pm 0,5\%$ (MID)		
Dimensions		650X664H1677 mm		
Structure material		Acciaio INOX		
Marking		CE-M EU Type Approval No. T10821 (MID 2014/32/UE)		
Flow rate	Hydraulic	Version	Display	Code
10 l/min	Standard	Single-side	Comptometric	AT30 U 8 1 0 A M C M
40 l/min	Standard	Single-side	Comptometric	AT30 U 8 2 0 A M C M
10+40 l/min	Alternate	Single-side	Comptometric	AT30 U 9 1 2 A M C M
10+40 l/min	Alternate	Two-side	Comptometric	AT30 U 9 1 2 A B C M
10+40 l/min	Standard	Two-side	Comptometric	AT30 U 8 1 2 A B C M
40/40 l/min	Alternate	Two-side	Comptometric	AT30 U 9 2 2 A B C M
40/40 l/min	Standard	Two-side	Comptometric	AT30 U 8 2 2 A B C M

## **AT30/LV METROLOGICAL ADBLUE® DISPENSER FOR TRUCK OR LV CARS REFUELLING**

AT30/LV/U series AdBlue® dispenser, complete of AdBlue® tank, MID version for retail use, single hydraulic, double or alternate on two nozzle, comptometric, electronic totalizer, quick refueling connection, stainless steel magnetostrictive additive level measurement probe, load limiting valve with optical and acoustic overfill warning, hose reel and heater. With electronic meter without moving parts, Elaflex AdBlue® flexible hose, ZVA AdBlue® LV 10 l/min or HV 40 l/min Elaflex nozzle. Stainless steel structure. MID accuracy  $\pm 0,5\%$ . MID B+D Certificate. **In the double or alternate version it is particularly suitable for both heavy duty vehicle (HV) and car (LV).**



Single nozzle version



Double nozzle version

AdBlue® dispenser, complete of AdBlue® tank, comptometric display, MID electronic meter without moving parts, Elaflex. Hose reel and heater.				
Accuracy		$\pm 0,5\%$		
Dimensions		1833x686,50H1725 mm		
Integrated tank capacity		500 l		
Structure material		Acciaio INOX		
Marking		CE-M EU Type Approval No. T10821 (MID 2014/32/UE)		
Flow rate	Hydraulic	Version	Display	Code
10 l/min	Standard	Single-side	Comptometric	AT30LVU 8 1 0 A N M C M 5
40 l/min	Standard	Single-side	Comptometric	AT30LVU 8 2 0 A N M C M 5
10+40 l/min	Standard	Two-sides	Comptometric	AT30LVU 8 1 2 A A B C M 5
10+40 l/min	Alternate	Single-side	Comptometric	AT30LVU 9 1 2 A A M C M 5
10+40 l/min	Alternate	Two-sides	Comptometric	AT30LVU 9 1 2 A A B C M 5
40+40 l/min	Alternate	Two-sides	Comptometric	AT30LVU 9 2 2 A A B C M 5
40+40 l/min	Standard	Two-sides	Comptometric	AT30LVU 8 2 2 A A B C M 5

## OPTIONS FOR ADBLUE® DISPENSER



BREAK-AWAY for delivery nozzle. Detach the hose in case of forgetting of the nozzle into the tank. It includes two safety valves that prevent fuel spillage.

Description	Code
Break-away for AdBlue® LV delivery nozzle	AT10218
Break-away for AdBlue® HV delivery nozzle	AT04410



ELECTROMECHANICAL TOTALIZER 7-digit + cable.

Description	Code
Electromechanical 7-digit	AT14006



RS232 SERIAL INTERFACE.

Description	Code
RS232 serial interface	AT06406



RS485 CPT/MODBUS SERIAL INTERFACE.

Description	Code
RS485 CPT/MODBUS serial interface	AT06606



C. LOOP NUOVO PIGNONE SERIAL INTERFACE.

Description	Code
C. Loop Nuovo Pignone serial intercafe	AT06506



C. LOOP GILBARCO SERIAL INTERFACE.

Description	Code
C. Loop Gilbarco serial interface	AT29506



RED/GREEN SIGNAL UNIT available in standard version and Ex mb, complete with cable length 1 m.

Version	Code
Standard	AT30106
Atex Ex mb 12 V	AT01113/A/12/01



100 PULSES/LITER KIT for parallel connection to management systems. Including extension on CPU.

Description	Code
100 pulses/liter	AT05108

## **ACCESSORIES FOR ADBLUE® DISPENSER**



EMERGENCY SHEAR VALVE for automatic closing of the AdBlue® adapter hose in the event of a collision with the equipment attached to it.

<i>Dimensions</i>	<i>Material</i>	<i>Code</i>
DN 1" F/F	AISI 316/POM	AT17711/1
DN 3/4" F/F	AISI 316/POM	AT17711/3



BASEMENT to simplify the operation of the dispenser installation.

<i>Description</i>	<i>Code</i>
Basement for AT02 AdBlue® dispenser	ATO15104
Basement for AT02/LC AdBlue® dispenser	ATL17212
Basement for AT30/F AdBlue® 2 product dispenser	ATE24109/2
Basement for AT30/U AdBlue® dispenser	ATE03410

### ***AdBlue® dispenser example of application***





# PUMPING GROUP AND ACCESSORIES FOR ADBLUE®



*AdBlue® is a registered trademark of VDA (Verband der Automobilindustrie)*

## PUMPS FOR ADBLUE®



MANUAL PUMP FOR ADBLUE® DRUMS complete with suction rigid hose and flexible with manual nozzle.

Dimensions	375X357X275 mm uscita 3/4"
Flexible hose length	3 m
Description	Code
Manual pum for AdBlue® drums	AT14910



MULTI-IMPELLER SUBMERSIBLE PUMP FOR ADBLUE®

Operating range	1 ÷ 5.4 m3/h with head up to 46 metres
Liquid temperature range	0°C ÷ +35°C
Max immersion depth	12 m
Motor protection degree	IP68 class F
Discharge port diameter	1"
Pump max diameter	150 mm
Cable length	15 m
Material	Aisi 304 stainless steel
Power	Code
0,55 kW 2 impellers	AT20716/600
0,65 kW 3 impellers	AT20716/700
0,75 kW 4 impellers	AT20716/800

MF 1" stainless steel non return valve	AT000919
Fixing kit	ATO14817



PNEUMATIC PUMP FOR ADBLUE®.

Power supply	Compressed air (min 2 bar, max 8 bar)
Compression ratio	1:1
Output pressure	2-8 bar
Flow rate	35 l/min
Compressed air connection	F 1/4" BSP
Product output connection	F 3/4" BSP
Air consumption	210 l/min
Pumping length	260 mm
Seals	EPDM
Description	Code
Pneumatic pump for AdBlue® transfer	AT45406



ADBLUE® DELIVERY KIT for IBC tanks.

Power supply 50 Hz	1x220-240 V ~
P1 max	0,80 kW
P2 max	0,55 kW 0,75 HP
In	3,7 A
Capacitor	12,5 uF 450 Vc
Description	Code
AdBlue® delivery kit for IBC tanks	ATE03011

# MANHOLE ACCESSORIES FOR ADBLUE® PLANTS



*AdBlue® is a registered trademark of VDA (Verband der Automobilindustrie)*

## ACCESSORIES FOR ADBLUE® PLANTS



LOADING QUICK COUPLER complete with dust cap for the safe refuelling of the AdBlue® tank.

Dimensions	Material	Code
DN 2" F	AISI 316	AT12406



OVERFILL LIMITER VALVE for AdBlue®. It reduces the flow to the maximum allowed limit during the discharge phase of the product in the tank.

Dimensions	Material	Code
DN 2" M/M	AISI 304/PE	ATE16408
DN 3/4" M/M	AISI 316	ATR442-80SS



PRESSURE/VACUUM VALVE with a microfibres dust filter to prevent contamination of the stored product.

Dimensions	Material	Code
DN 1/2" F	AISI 316/PE	AT01314
DN 1" F	AISI 316/PE	AT15412
DN 1" 1/2 F	AISI 316/PE	AT11008



FLOAT LEVEL SWITCH.

Max switching voltage	28,8 VDC
Max switching current	0,5 A
Diameter	45 mm
Connection	1/4"
Cable	PVC shielded, standard length 5 m
Output functions	Switch
Protection degree	IP68 (output cable IP67)
Marking	ATEX II 1G Ex ma IIC T6 Ga
Description	Code
Float level switch	CPTL07/S/3/1/00/008/05



PROTECTION CIRCUIT FOR Ex m DEVICES, to be used with the level switches, with the purpose of limiting the voltage and current within the specified limits.

Use	Zone 0 and 1
Description	Code
Protection circuit for Ex m devices	AT17511/A



# FLUID DISPENSERS



## AT30 SERIES FLUIDS DISPENSER

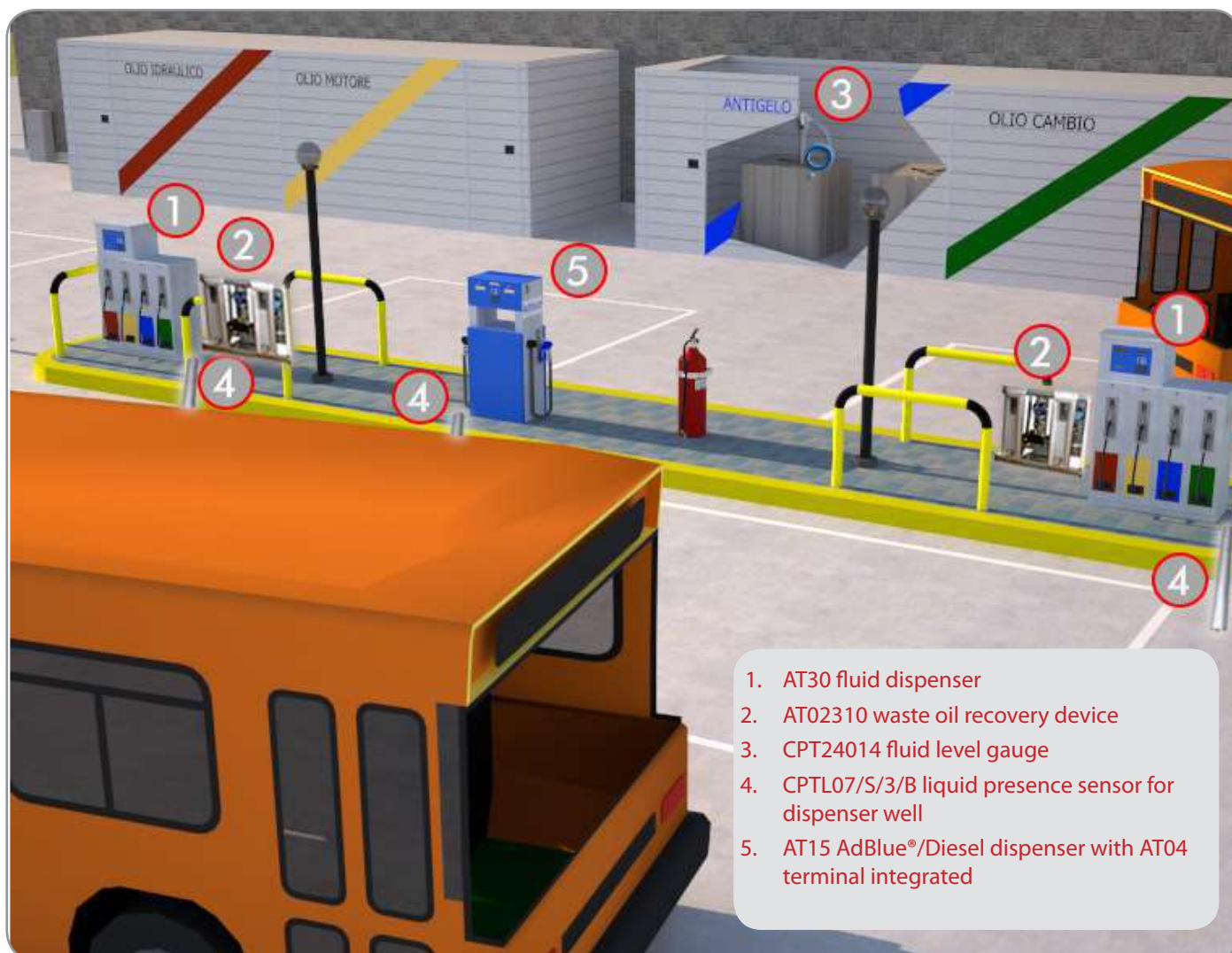
Single or multiproduct dispenser, modular, for the oil and additives delivery. Stainless steel structure. Nozzle complete of drip device. Volumetric calculating device and electronic totalizer.



Volumetric oil and additive dispenser.

Accuracy	± 1,5% (private use)
Flow rate	20÷80 l/min (depending on the model)
Dimensions	515X600/900/1200H1650 mm
External structure material	Stainless steel

Version	Model	Display	Code
1 product	One-side	Volumetric	AT30 F8X000XNNNMV
1 product	Two-side	Volumetric	AT30 F8X000XNNNBV
2 products	One-side	Volumetric	AT30 F8XX00XXNNMV
2 products	Two-side	Volumetric	AT30 F8XX00XXNNBV
3 products	One-side	Volumetric	AT30 F8XXX0XXXXNMV
3 products	Two-side	Volumetric	AT30 F8XXX0XXXXNBV
4 products	One-side	Volumetric	AT30 F8XXXXXXXXXNMV
4 products	Two-side	Volumetric	AT30 F8XXXXXXXXXNBV



## Options for AT30 series fluids dispenser



ELECTROMECHANICAL TOTALIZER 7-digit + cable.

Description	Code
Electromechanical 7-digit	AT14006



RS232 serial interface.

Description	Code
RS232 serial interface	AT06406



RS485 CPT/MODBUS serial interface.

Description	Code
RS485 CPT/MODBUS serial interface	AT06606



100 PULSES/LITER KIT for parallel connection to management systems. Including extension on CPU.

Description	Code
100 pulses/liter	AT05108



AUTOMATIC DOSING DEVICE used to mixing water with antifreeze (other fluids on request) in automatic way.

Pressure supply	4 bar (air)   3 bar (water, fluid)
Concentration	0÷50%
Flow rate	35 l/min
Description	Code
Automatic dosing device	AT13510



AUTOMATIC DEVICE for waste oil recovery from AT09107 tank. Complete with pump and control logic.

Pressure supply	2÷6 bar
Delivery pressure	4 bar
Depressure	0,8 bar
Air consumption	210 l/min
Description	Code
Automatic device for waste oil recovery	AT02310





Accessories for AT30 series fluids dispenser



BASEMENT to simplify the operation of the dispenser installation.

Description	Code
Basament for 2 nozzles dispenser	ATE21409/2
Basament for 3 nozzles dispenser	ATE21409/3
Basament for 4 nozzles dispenser	ATE21409/4
Basament for 6 nozzles dispenser	ATE21409/6
Basament for 8 nozzles dispenser	ATE21409/8



HIGH FLOW PNEUMATIC PUMP for low and medium viscosity oil, pure antifreeze and waste oil transfer.

Product	Compres- sion ratio	Flow rate	Use	Code
Low viscosity oil	1,4:1	48 l/min	For drums of 208 l	AT22513/XXX*
Low viscosity oil	1,3:1	35 l/min	Wall version	AT22613/XXX*
Medium viscosity oil	3:1	23,7 l/min	For drums of 208 l	AT07508/XXX*
Medium viscosity oil	3:1	20,5 l/min	Wall version	AT22713/XXX*
Medium viscosity oil	5:1	15 l/min	Wall version	AT01220/XXX*
Antifreeze	1,3:1	35 l/min	For drums of 208 l	AT22813/XXX*
Antifreeze	1,3:1	35 l/min	Wall version	AT22913/XXX*
Antifreeze	3:1	20,5 l/min	Wall version	AT01320/XXX*

\* XXX= suction tube length (cm)

Wall fixing bracket	AT00920
Fixing ring	AT01020
Suction tube block	AT01120



SOLENOID VALVE FOR PNEUMATICS VALVES.

Power supply	24 VDC / 230 VAC
Acting	Direct
Kv	0,45 m³/h
Ø int.	4,5 mm
Version	Code
Power supply 24 VDC	AT11810
Power supply 230 VAC	AT06220



COMPRESSED AIR TREATMENT UNIT composed of pressure regulator with manometer, condensation water separator and lubricator.

Description	Code
Compressed air treatment unit	AT08807





LEAK DETECTION SENSOR FOR OIL SYSTEMS.

Pressure range	0,5÷5 bar (std setting to 5 bar)
Max pressure	20 bar
Material (to connection)	Anodized aluminum
Marking	S.A. for industrial use (Zone 0) ATEX II 3 GD Ex e T6 (Zone 2)

Description	Code
Leak detection sensor	AT11712/5/00

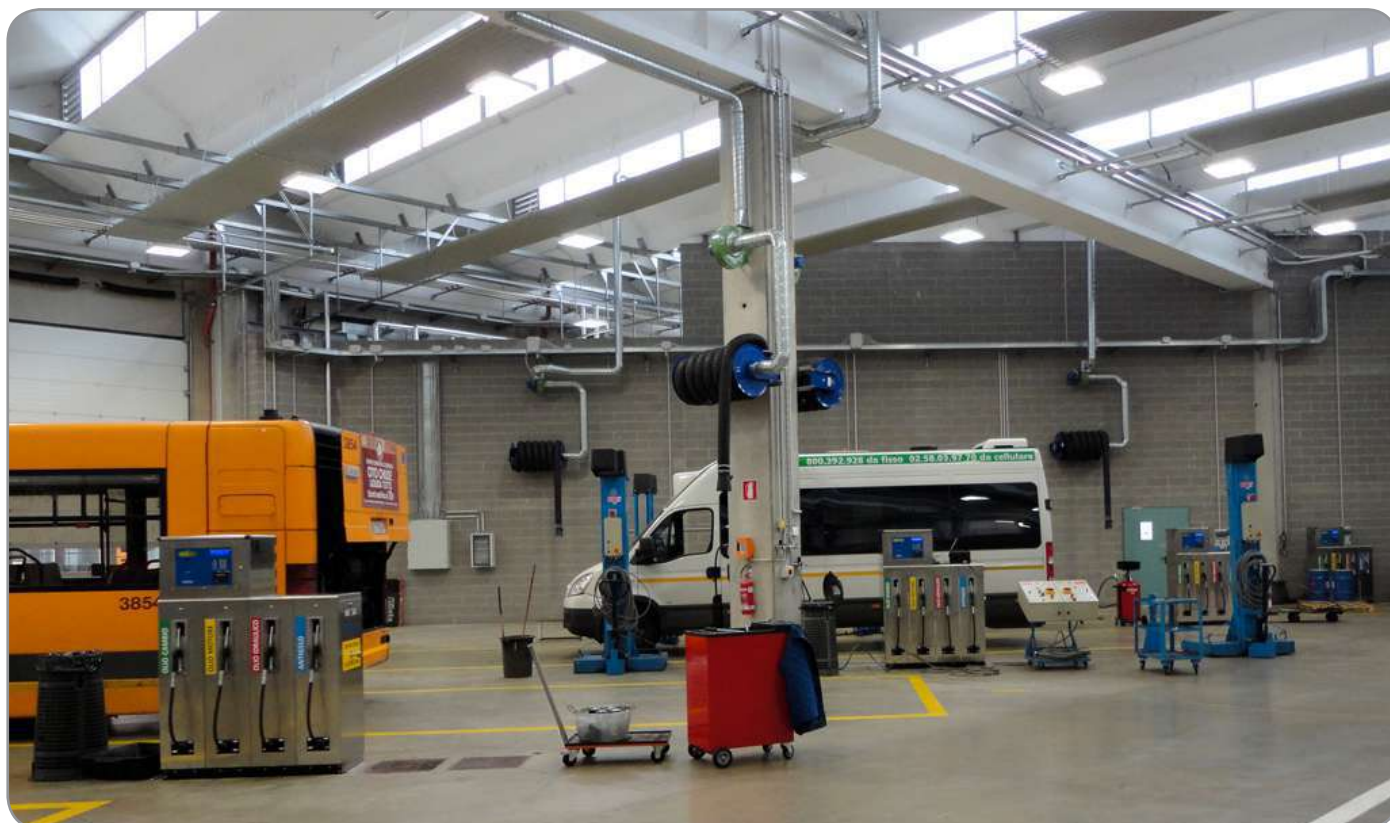


FLOAT LEVEL SWITCH.

Max switching voltage	28,8 VDC
Max switching current	0,5 A
Diameter	45 mm
Connection	1/4"
Cable	PVC shielded, standard length 5 m
Output functions	Switch
Protection degree	IP68 (output cable IP67)
Marking	ATEX II 1G Ex ma IIC T6 Ga

Description	Code
Float level switch	CPTL07/S/3/1/00/008/05

**AT30 fluids dispenser example of application**





# CENTRALIZED SYSTEMS FOR FLUIDS DISTRIBUTION



## AUTOMATION FOR FLUIDS

### OPERATOR TERMINAL



2/4 PRODUCT TERMINAL OPERATOR connectable to management systems. It controls the delivery through the measuring units (1 to 4).

Products	Code
2 products	AT07206
4 products	AT39306
18-24 VCA power supply for 2 operator terminal max	AT16114/1
18-24 VCA power supply for 4 operator terminal max	AT16114/2
Setting keyboard	AT00606

### METER DEVICES FOR FLUIDS



MEASURING GROUP composed of pulse emitter counters, 24 VAC solenoid valve, inlet filter and intercept faucet.

Viewer (X1)	Absent (X1=N), Present (X1=P)
Product (X2)	Motor oil (X2=O), Brakes oil (X2=F), Refrigerants (X1=R)
Output pulses (X3)	0 (X3=0), 1 (X3=1), 2 (X3=2)
Meter	Code
Standard	AT36506/N/X1/X2/X3
Light	AT36506/L/X1/X2/X3
Metrical	AT36506/M/X1/X2/X3

### WASHING KIT



Version	Code
Single	AT01722/S
Double	AT01722/D

### STAND ALONE TRANSPONDER READER



MEDIA POWER RECEIVER WITH INTEGRATED ANTENNA FOR TRANSPONDER READING.	
Power supply	8÷15 VDC 150 mA
Reading distance	5÷30 cm ± 10% (depending on the transponder)
Data signal	RS422 multidrop/(RS485 optional)
Transponder type	Code
LF transponder	AT24001/D/A



DISC AND GLASS FORMAT TRANSPONDER to apply to the tank cap to be refueled.	
Reading range	<= 2÷5 cm (disc); <= 100 cm (glass)
Dimensions	Ø20X20 mm (hole 4 mm) (disc) Ø 3,88 mm ±0,05 mm X 31,2 mm ±0,5 mm (glass)
Version	Code
Disc format transponder (rivet included)	AT02916
Glass format transponder	AT04301/R/2



## TRANSPONDER READERS FOR VEHICLE TAG



WIRELESS READER for transponders positioned on vehicle tanks reading. The data detected by radio (wireless) are sent to the central management system.

Radio frequency	868 MHz
RF frequency	134.2 kHz
Reading distance	10 cm
Description	Code
Wireless transponder reader	AT14214

IP42 wrap with cable length 15 m	AT13907
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RADIO RECEIVER to communicate with AT14214 series wireless reader devices.

Power supply	5÷30 VDC
Consumption	12÷30 mA
Radio frequency	868 MHz
Data output	RS232/RS485
Description	Code
Radio receiver for wireless transponder reader	AT12212/A/8/N

### Accessories for transponder reader



LED SIGNAL amber colored with IP56 enclosure

Description	Code
Led signal with IP56 enclosure	AT20916/A

## FLUIDS/REFRIGERANTES AUTOMATION MANAGEMENT EQUIPMENT



"IDP" STAND ALONE FORECOURT MANAGEMENT INTERFACE. It stores the list of vehicles enabled to refueling and the delivery made. It is also able to operate in case of absence of connection to more remote systems.

Power supply	100-240 VAC max 100 W
Remote data management	LAN/RS232/ GSM (optional)
Computing device connection	Code
4 computing device C. Loop	AT42006/A/F
8 computing device C. Loop	AT42006/B/F
8 computing device RS485	AT42006/C/F
16 computing device RS485	AT42006/D/F

OTCONTROL TRE SOFTWARE for data processing and visualizing from Host. It is available Server Full, Server Lite and Client (only for data visualization) version.



Version	Code
Server Full	ATS04606/SFL
Server Lite	ATS04606/SLT
Client Full	ATS04606/CFL
Client Lite	ATS04606/CLT

*Examples of application*



1. AT42006 IDP forecourt interface
2. AT14214 transponder reader
3. AT07006 hose reel
4. AT36506 measuring group
5. AT22513 pneumatic pump
6. CPT24014 fluids level gauge



*Bus washing automation*



# EQUIPMENT FOR FLUID DELIVERY SYSTEMS



## **PUMPS FOR FLUIDS**



CENTRALIZED FLUID PUMPING EQUIPMENT with container and electric control panel.		
Max pressure	20 bar	
Motor power	2,2 KW	
Power supply	230/380 VAC	
In-Out connection	1"-3/4"	
<i>Flow rate</i>	<i>Code</i>	
33 l/min	AT07306/30	
53 l/min	AT07306/50	

## **FLUIDS LEVEL MEASURING GAUGE**



FLUIDS LEVEL MEASURING GAUGE for drums or tanks, 1 float.		
Power supply	24 VDC	
Accuracy	± 0,1 mm	
Repeatability	± 0,005% FS	
Float	Ø 45 mm	
Temperature range	-20°C ÷ +70°C	
Length	XXX cm (5 ÷ 250) (step 25 mm up to 1 m; step 50 > 1 m)	
Electrical connection	Cable	
Protection degree (head)	IP68	
<i>Description</i>	<i>Code</i>	
Fluids level measuring gauge	CPT24014/6/L/XXX	

RS232/RS485 connection interface for fluids level measuring gauge	AT20815/A
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*Pneumatics pumps example of application*



*Electricals pump example of application*



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# ELECTRICAL ENERGY CHARGER



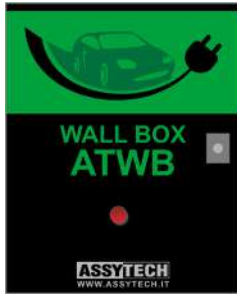
## **ELECTRICAL ENERGY CHARGER**

### **ATWB – AC CHARGE STATION WALL MOUNTING FOR PRIVATE USE**

ATWB series charge station able to charge the batteries of electric transport vehicles.

It is available with type 2 socket cable or with integrated cable, with or without protections in the single-phase versions, with energy meter (optional) and three-phase.

It is ideal for the domestic use: garages, private parking spaces, condominiums, etc. that do not require access control as the use is normally limited to a few people, almost always for the exclusive use of the vehicle owners themselves.



230/400V 7/22 kW mode 3 type 2 charge station, for charging electric vehicles in alternating current for private use.

Power supply	230 VAC / 400 VAC
Nominal current	0,1 A – 32 A
Max power	7 kW – 22 kW
Charging type	Mode 3
Charging sockets	Typy 2 or 3A
Cable	Plug type 1 and 2 optional
Remote connection	RS485 protocol MODBUS/OCPP
Certifications	EN 61439-7; EN 61851-1 Low Voltage 2014/35/UE Directive EMC 2014/30/UE Directive

Type	Counter and display	Discharger	Differential protection	Cable with plug	Code
Single, one-phase, 7 kW	NO	NO	NO	NO	ATWBS11320NNNNI0N
Single, three-phases, 22 kW	NO	NO	NO	NO	ATWBS22320NNNNI0N
Single, one-phase, 7 kW	NO	YES	NO	NO	ATWBS11320NNNNI0S
Single, three-phase, 22 kW	NO	NO	NO	Type 2	ATWBS22300NNNNI3N
Single, one-phase, 22 kW	NO	YES	NO	NO	ATWBS22320NNNNI0S
Single, three-phase, 22 kW	NO	YES	NO	Type 2	ATWBS22300NNNNI3S





## ATWB30 – DC CHARGE STATION WALL MOUNTING FOR PRIVATE USE

ATWB30 serie charge station able to charge all current and next generation vehicles with the CCS standard.

The 30 kW Wall Box is a fast DC (direct current) charger with Mode 4 charging type.

Charging mode 4 consists of connection in direct current up to 200A, 400V. With this system it is possible to recharge the vehicles in a few minutes, the charger is external to the vehicle (in the column).

It is ideal for the domestic use: garages, private parking spaces, condominiums, etc. that do not require access control as the use is normally limited to a few people, almost always for the exclusive use of the vehicle owners themselves.



400V 30 kW mode 4 type CCS2 , for charging electric vehicles in alternating current for private use.

Power supply	400 VCA $\pm 20\%$
Nominal current	75 A
Max power	30 kW
Charging type	Mode 4
Charging socket	CCS2
Remote connection	LAN Standard, 4G/Wifi (optional)
Certifications	CE, EN 61851, EN 62196 DIN 70121, ISO 15118

Type	Counter and display	Discharger	Differential protection	Cable with plug	Code
Single, DC, 30 kW	SI	SI	NO	SI	ATWB30S23570SSNTM4S



## AT02-EF AC FAST CHARGER FOR PRIVATE USE AND FLEET

AT02-EF series dispenser able to charge the batteries of electric transport vehicles.

It is made with a stainless steel structure and is equipped with 1 or 2 single or three phase type 2 sockets of 7 or 22kW.

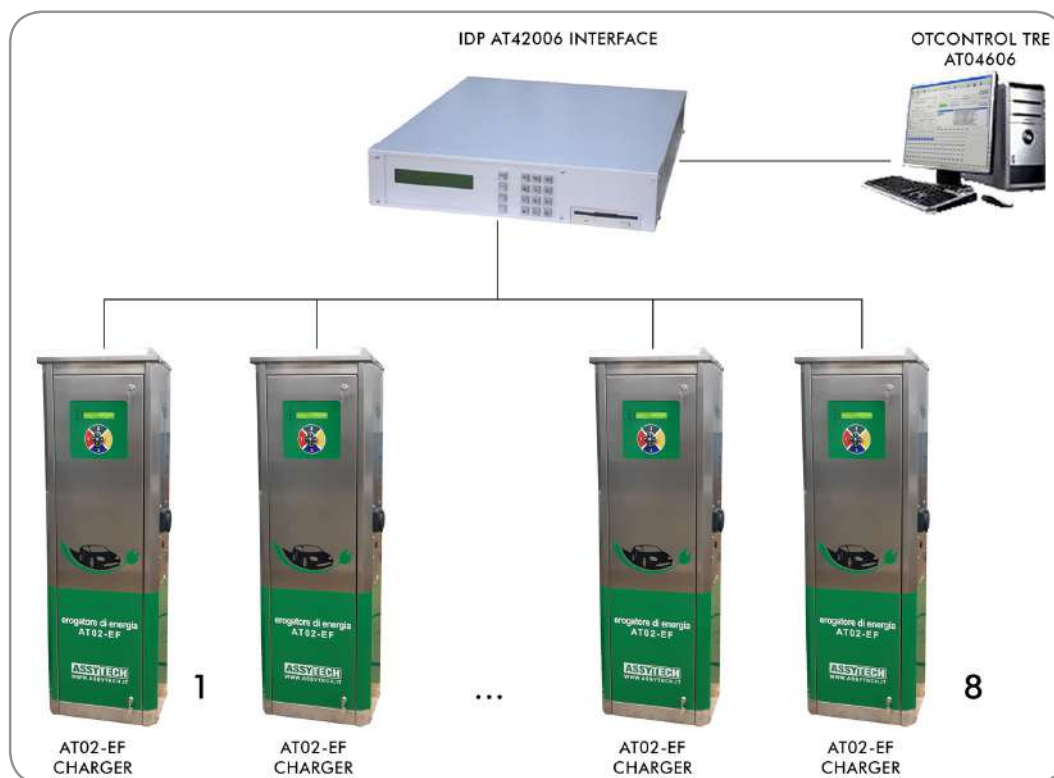
It offers the possibility of remote modulation of the charging power based on the energy currently available from the power supply system. It is designed for connection to automation terminal and refueling authorization



400V 22/44 kW mode 3 type 2 charger, for charging electric vehicles in alternating current for private use and fleet.

Power supply	230 VAC / 400 VAC
Nominal current	16 A – 32 A
Max power	22 kW – 44 kW
Charging type	Mode 3
Charging socket	Type 2
Remote connection	RS485 protocol MODBUS RTU / OCPP
Certifications	EN 61439-7; EN 61851-1 Low Voltage 2014/35/UE Directive EMC 2014/30/UE Directive

Type	Discharger	Differential protection	OCPP connection	Code
Single, 22 kW	YES	NO	NO	AT02EFS2232000NNNMAM
Single, 22 kW	YES	YES	NO	AT02EFS2232000NNSMAM
Single, 22 kW	YES	YES	YES	AT02EFS2232000NSSMAM
Double, 44 kW	YES	NO	NO	AT02EFD2332020NNNMAM
Double, 44 kW	YES	YES	NO	AT02EFD2332020NNSMAM
Double, 44 kW	SI	SI	SI	AT02EFD2332020NSSMAM



## AT02-EA AC FAST CHARGER FOR SERVICE STATION

AT02-EA series dispenser able to charge the batteries of electric transport vehicles.

It can be associated with fuel and additive dispensers already used for the refueling of traditional vehicles.

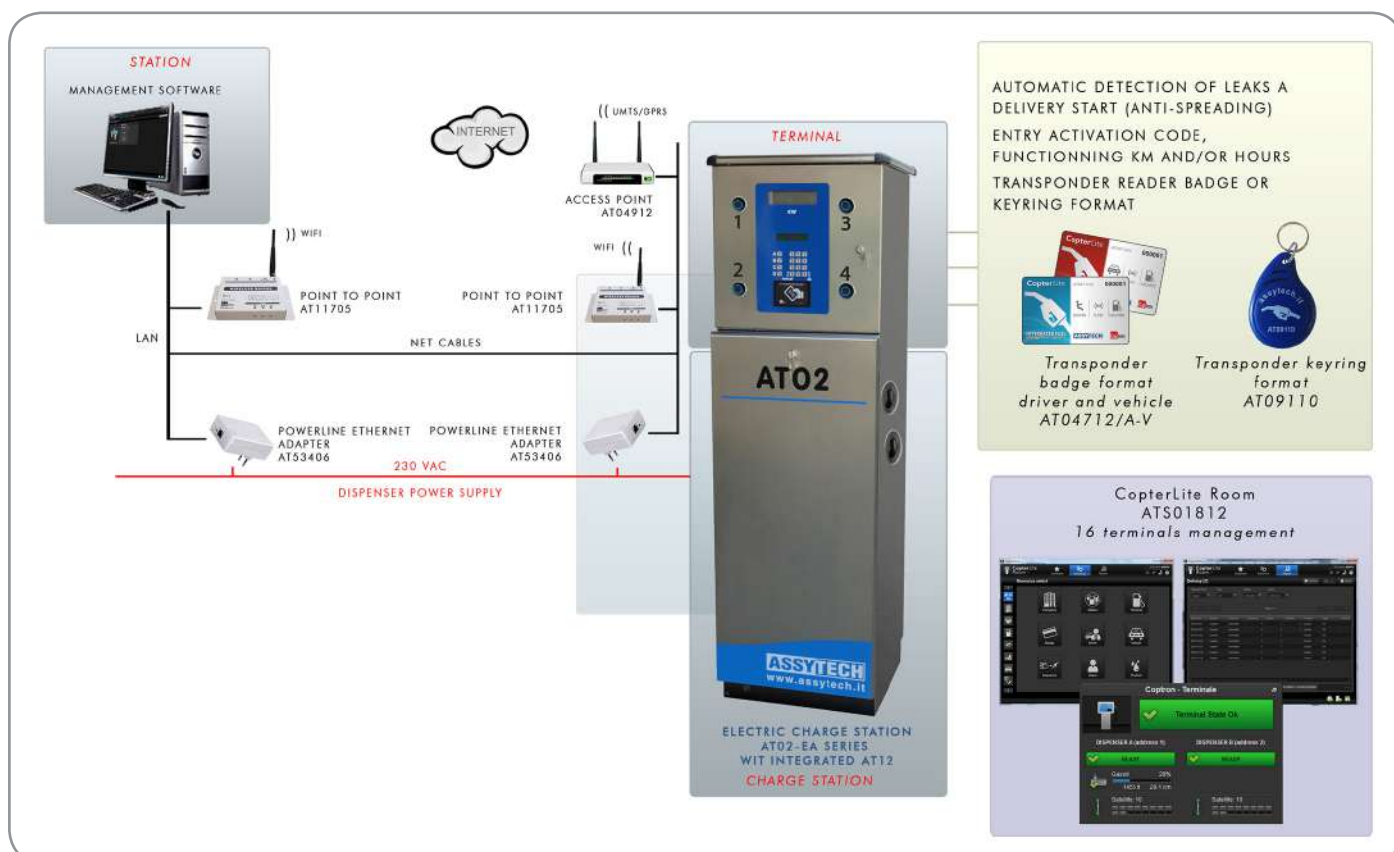
The authorization to charge the vehicle is authorised by via serial connections or with transponder devices in various configurations depending on the customer's needs.



400V 32A 22/44 KW mode 3 type 2 fast charger, for charging electric vehicles in alternating current for service station.

Power supply	230 VAC / 400 VAC
Nominal current	16 A – 32 A
Max power	22 kW – 44 kW
Charging type	Mode 3
Charging socket	Type 2
Remote connection	RS485 protocol MODBUS RTU / OCPP
Accuracy	0,5 (MID)
Certifications	EN 61851-1 Low Voltage 2014/35/UE Directive EMC 2014/30/UE Directive

Type	Terminal AT12	C. Head and counter MID	OCPP connection	Differential protection	Code
Single, 22 kW	NO	SI	NO	SI	AT02EAS2222000NNSMCM
Single, 22 kW	SI	SI	NO	SI	AT02EAS2222000SNSMCM
Double, 44 kW	NO	SI	NO	SI	AT02EAD2222200NNSMCM
Double, 44 kW	SI	SI	NO	SI	AT02EAD2222200SNSMCM



## AT15-ER DC FAST CHARGER

T15-ER series charger able to load all current and next generation electric vehicles with CCS2, CHAdemo standards and AC Type 2.  
2. Configurable as a single, double (default), or triple socket supporting the changing needs of each customer.



400 V 60/45 KW fast charger, for charging electric vehicles in continuous current.	
Power supply	500 VDC / 400 VAC
Nominal current	120 A
Max power	60 kW
Charging type	CC multi-standard 2 (mode 2), con AC (mode 3)
Charging socket	Type 2
Remote connection	OCPP 1.6 ecc / IFSF-LON / H2P / PUMALAN /DART
Certifications	EN 61851-1, EN 62196, DIN 70121, ISO 15118 Low Voltage 2014/35/UE Directive EMC 2014/30/UE Directive

Type	Code
60 kW	AT15 CCS
60 kW	AT15 CHAdemo
60 kW	AT15 CCS + CHAdemo (not simultaneous)
60 kW	AT15 CCS + CHAdemo (simultaneous delivery)
60 kW + 22 kW	AT15 CCS + AC type 2
60 kW + 22 kW	AT15 CHAdemo + AC type 2
60 kW + 22 kW	AT15 CCS 60kw + CHAdemo 60kw + AC type 2 (DC not simultaneous)
60 kW + 22 kW	AT15 CCS 60kw + CHAdemo 60kw + AC type 2 (DC with simultaneous delivery)
60 kW + 22 kW	AT15 CCS 60kw + CCS + CHAdemo 60kw + AC tipo 2 (DC not simultaneous)



CCS CHAdemo AC Type 2



CCS CHAdemo



Dual CCS



CCS + AC Type 2



# WATER DISPENSERS



## WATER DISPENSERS



DISPENSER FOR WATER REFUELLING on vehicles such as small trucks, sweepers and operating machines. The electronic calculating indicating device (ATCH14) installed allows viewing the volume, predetermining the quantity of water to be dispensed and stop dispensing on reaching the previously set volume.

	Water dispenser		
Power supply	24 VDC / 230 VAC		
Consumption	50 VA		
Max flow rate	350 l/min		
Meter accuracy	± 2%		
Max operating pressure	16 bar		
Calculating device	ATCH14, LCD backlight display, 5 digit H 1" and preset device		
Heater	Optional		
Delivery hose	A costumer care		
External structure material	Stainless steel Aisi 304		
Internal pipes	Galvanized steel and brass		
Version	Power supply	Output	Code
Master	24 VCC	UNI45	AT11214/A/024/UNI45
Master	230 VCA	UNI45	AT11214/A/230/UNI45
Master	24 VCC	UNI70	AT11214/A/024/UNI70
Master	230 VCA	UNI70	AT11214/A/230/UNI70
Slave	24 VCC	UNI45	AT11214/B/024/UNI45
Slave	230 VCA	UNI45	AT11214/B/230/UNI45
Slave	24 VCC	UNI70	AT11214/B/024/UNI70
Slave	230 VCA	UNI70	AT11214/B/230/UNI70

### Accessories for water dispensers

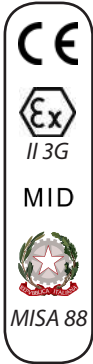
15 m hose with tap	AT13314
230 VAC 100 W head heater for temperatures below -20° C	AT49706
230 VAC 100 W piping heater for temperatures below 0° C	AT13414

# MOBILE TANK DISPENSER FOR DIESEL





## MOBILE TANK DISPENSER FOR DIESEL



DIESEL MOBILE TANK WITH AT01 DISPENSER. The dispenser is designed for integration of the AT04 management terminal. Container supplied on request.

Flow rate	Tank dimension	Roof	Code
40 l/min	5000 l	Absent	AT20103/5/S/4/050
40 l/min	5000 l	Present	AT20103/5/T/4/050
70 l/min	5000 l	Absent	AT20103/5/S/4/075
70 l/min	5000 l	Present	AT20103/5/T/4/075
80 l/min	5000 l	Absent	AT20103/5/S/4/090
80 l/min	5000 l	Present	AT20103/5/T/4/090
80 l/min	9000 l	Absent	AT20103/9/S/4/050
40 l/min	9000 l	Present	AT20103/9/T/4/050
80 l/min	9000 l	Absent	AT20103/9/S/4/090
80 l/min	9000 l	Present	AT20103/9/T/4/090

## ACCESSORIES FOR MOBILE TANK DISPENSER FOR DIESEL



MINIMUM FLOAT LEVEL SWITCH.

Max switching voltage	28,8 VDC
Max switching current	0,5 A
Diameter	45 mm
Connection	1/4"
Cable	PVC shielded, standard length 5 m
Protection degree	IP68 (output cable IP67)
Marking	ATEX II 1G Ex ma IIC T6 Ga
Description	Code
Minimum float level switch	CPTL07/S/3/1/00/008/05



LOW LEVEL KIT.

Diameter	45 mm
Connection	1/2"
Marking	ATEX II 1G Ex ma IIC T6 Ga
Description	Code
Low level kit	ATO10220



PROTECTION CIRCUIT FOR Ex m DEVICES, to be used with the level switches, with the purpose of limiting the voltage and current within the specified limits.

Use	Zone 0 and 1
Description	Code
Protection circuit for Ex m devices	AT17511/A



PUSH BUTTON for level and volume product visualization.

Contact type	Normally Open
Degree protection	IP67
Description	Code
Push button	ATO08013





TANK LEVEL SENSOR standard and high resolution version for measurement diesel/water and the temperature. The high resolution version is to be used in association with the densimeter AT05610.

Accuracy	$\pm 0,5 \text{ mm (std)} \mid \pm 0,25 \text{ mm (high res.)}$
Temperature accuracy	$\pm 1^{\circ}\text{C}$
Serial data connection	TTL

Description	Code
Level sensor standard version	AT05310/X/XXXX
Level sensor high resolution version	AT15610/G/XXXX



DENSITY SENSOR FOR AT15610 series level sensor.

Accuracy	$\pm 2 \text{ g/l}$
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Description	Code
Density sensor	AT05610



SERIAL INTERFACE TO CONNECT No. 1 TTL LEVEL GAUGE to the dispenser calculating head. The volume is directly visible on the dispenser display by pressing the specific button.

Gauges and wells sensors connectable	1 + 2
Product	Diesel

Description	Code
Serial interface for 1 TTL level gauge	AT05910/T



HOSE REEL in stainless steel FE37 complete with Ø 1 m hose for diesel.

Hose	Spool width	Dimension	Code
Ø 1" - 8 m	150 mm	550X300H450 mm	ATO09704/08
Ø 1" - 10 m	300 mm	460X590H450 mm	ATO09704/10
Ø 1" - 15 m	300 mm	460X590H450 mm	ATO09704/15
Ø 1" - 25 m	400 mm	520X550X540 mm	ATO09704/25

### Tanks-dispensers for diesel example of application



## **MOBILE TANK**

*Mobile tank built according to customer specifications*



*Storage and refuelling mobile tanks built according to customer specifications*





## **TANK TRUKS REFUELLING**

*Fuel loading deport*



*Fuel filtration skid for tank trucks*



*Fuel reception filtration skid*







# PROFESSIONAL EQUIPMENT FOR STORING AND DISPENSING ADDITIVES AND ADBLUE®



*AdBlue® is a registered trademark of VDA (Verband der Automobilindustrie)*

## **NAKED SERIES ADBLUE® TANK DISPENSER**



NAKED ADBLUE® TANK DISPENSER for internal use with 2000, 3000, 5000 and 11600 l tank and delivery group.

Accuracy	± 1,5% (private use)	
Tank capacity	Code	
2000 l	AT03711/200	
3000 l	AT03711/300	
5000 l	AT03711/500	
11600 l	AT03711/116	

## **HEAVY DUTY SERIES ADBLUE® TANK DISPENSER**



TANK DISPENSER "EA" with 2000, 3000, 5000, 11600 l tank. Galvanized steel structure, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation, heating and electric panel. Prepared for measuring probe for additive level and load from below. Containment tank on request (\*V). Without delivery group.

EA module (XX)	SF (Single frontal) / SD (Single right) SS (Single left)	
Tank capacity	Delivery group	Code
2000 l	Absent	AT09906/200/N*/EA/XX
3000 l	Absent	AT09906/300/N*/EA/XX
5000 l	Absent	AT09906/500/N*/EA/XX
11600 l	Absent	AT09906/116/N*/EA/XX



TANK DISPENSER "GE" with 2000, 3000, 5000, 11600 l tank. Galvanized steel structure, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation, heating and electric panel. Prepared for measuring probe for additive level and load from below. Containment tank and leak sensor on request (\*V). Integrated dispensing unit, approved ZVA nozzles, heated housing, reel, electronic head without batteries, meter for non-third party use, +/- 1,5% accuracy.

Dispenser type (XX)	SF (Single frontal) / SD (Single right) SS (Single left) / DD (Double) / AA (Alternate)	
Tank capacity	Delivery group	Code
2000 l	For indoor use	AT09906/200/N*/GE/XX
3000 l	For indoor use	AT09906/300/N*/GE/XX
5000 l	For indoor use	AT09906/500/N*/GE/XX
11600 l	For indoor use	AT09906/116/N*/GE/XX



TANK DISPENSER "EC" with 2000, 3000, 5000, 11600 l tank. Galvanized steel structure, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation, heating and electric panel. Prepared for measuring probe for additive level and load from below. Containment tank and leak sensor on request (\* / V). Integrated brewing unit, ZVA approved nozzles, heated housing, hose reel, electronic head without batteries, electronic meter without moving parts, MID approval for use in relation to third parties, precision +/- 0,5%.

Dispenser type (XX) SF (Single frontal) / SD (Single right)  
SS (Single left) / DD (Double) / AA (Alternate)

Tank capacity	Dispenser type	Code
2000 l	Comptometric (third-paries sales)	AT09906/200/N*/EC/XX
3000 l	Comptometric (third-paries sales)	AT09906/300/N*/EC/XX
5000 l	Comptometric (third-paries sales)	AT09906/500/N*/EC/XX
11600 l	Comptometric (third-paries sales)	AT09906/116/N*/EC/XX

## LC SERIES ADBLUE® TANK DISPENSER



TANK DISPENSER LC "GE" with 500, 1000, 2000, 3000 and 4000 l tanks. Galvanized steel frame, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation and electric panel. Prepared for measuring probe for additive level. Containment basin and leak sensor on request (\* / V). Electronic counting head without backup battery. Dispensing group with heated nozzle, approved ZVA dispensing nozzle, meter for internal use, not related to third parties, precision +/- 1,5%.

Dispenser type (XX) SD (Single right) / SS (Single left) /  
DD (Double) / AA (Alternate)

Tank capacity	Delivery group	Code
500 l	For indoor use	AT13121/050/N*/GE/XX
1000 l	For indoor use	AT13121/100/N*/GE/XX
2000 l	For indoor use	AT13121/200/N*/GE/XX
3000 l	For indoor use	AT13121/300/N*/GE/XX
4000 l	For indoor use	AT13121/400/N*/GE/XX



TANK DISPENSER LC "EC" with 500, 1000, 2000, 3000 and 4000 l tanks. Galvanized steel frame, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation and electric panel. Prepared for measuring probe for additive level. Containment basin and leak sensor on request (\* / V). Integrated brewing unit, ZVA approved nozzle, heated housing, electronic head without batteries, electronic meter without moving parts, MID approval for (retail use), precision +/- 0,5%.

Dispenser type (XX) SF (Single frontal) / SD (Single right)  
SS (Single left) / DD (Double) / AA (Alternate)

Tank capacity	Delivery group	Code
500 l	Comptometric (thrid-paries sales)	AT13121/050/N*/EC/XX
1000 l	Comptometric (thrid-paries sales)	AT13121/100/N*/EC/XX
2000 l	Comptometric (thrid-paries sales)	AT13121/200/N*/EC/XX
3000 l	Comptometric (thrid-paries sales)	AT13121/300/N*/EC/XX
4000 l	Comptometric (thrid-paries sales)	AT13121/400/N*/EC/XX

## SHUTTLE SERIES ADBLUE® TANK DISPENSER



TANK DISPENSER SHUTTLE "EA" with 1350, 2000, 3000, 4000 and 5000 l tanks. Galvanized steel structure, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation, heating and electric panel. Prepared for measuring probe for additive level and load from below. Containment tank and leak sensor on request (\* / V). Without brewing group.

EA module  
SF (Single frontal) / SD (Single right)  
SS (Single left)

Tank capacity	Delivery group	Code
1350 l	Absent	AT28007/135/N*/EA/XX
2000 l	Absent	AT28007/200/N*/EA/XX
3000 l	Absent	AT28007/300/N*/EA/XX
4000 l	Absent	AT28007/400/N*/EA/XX
5000 l	Absent	AT28007/500/N*/EA/XX



TANK DISPENSER SHUTTLE "EA" with 1350, 2000, 3000, 4000 and 5000 l tanks. Galvanized steel structure, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation, heating and electric panel. Prepared for measuring probe for additive level and load from below. Containment tank and leak sensor on request (\* / V). Electronic counting head without backup battery. Dispensing group with heated nozzle, hose reel, approved ZVA dispensing nozzle, meter for internal use, not related to third parties, precision +/- 1,5%.

Dispenser type (XX)  
SF (Single frontal) / SD (Single right)  
SS (Single left) / DD (Double) / AA (Alternate)

Tank capacity	Delivery group	Code
1350 l	For indoor use	AT28007/135/N*/GE/XX
2000 l	For indoor use	AT28007/200/N*/GE/XX
3000 l	For indoor use	AT28007/300/N*/GE/XX
4000 l	For indoor use	AT28007/400/N*/GE/XX
5000 l	For indoor use	AT28007/500/N*/GE/XX



TANK DISPENSER SHUTTLE "EC" with 1350, 2000, 3000, 4000 and 5000 l tanks. Galvanized steel structure, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation, heating and electric panel. Prepared for measuring probe for additive level and load from below. Containment tank and leak sensor on request (\* / V). Integrated brewing unit, ZVA approved guns, heated housing, hose reel, electronic head without batteries, electronic meter without moving parts, MID approval for use in relation to third parties, precision +/- 0,5%.

Dispenser type (XX)  
SF (Single frontal) / SD (Single right)  
SS (Single left) / DD (Double) / AA (Alternate)

Tank capacity	Delivery group	Code
1350 l	Comptometric (thrid-paries sales)	AT28007/135/N*/EC/XX
2000 l	Comptometric (thrid-paries sales)	AT28007/200/N*/EC/XX
3000 l	Comptometric (thrid-paries sales)	AT28007/300/N*/EC/XX
4000 l	Comptometric (thrid-paries sales)	AT28007/400/N*/EC/XX
5000 l	Comptometric (thrid-paries sales)	AT28007/500/N*/EC/XX



## TWIN SERIES ADBLUE® TANK DISPENSER



TANK DISPENSER TWIN with 1350, 2000, 3000, 4000 and 5000 tanks. Galvanized steel frame, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation and electric panel. Prepared for measuring probe for additive level and load from below. Containment basin and leak sensor on request (\* / V). Integrated brewing unit, ZVA approved nozzle, heated housing, electronic head without batteries, electronic meter without moving parts, MID approval for retail use, precision +/- 0,5%. Note: it is possible to integrate the dispensers of the main manufacturers.

Dispenser type		S (Single) / D (Double) / A (Alternate)	
Tank capacity	Dispenser	Vehicles	Code
1350 l	AT02LC	/E: car/truck	AT06821/135/N*/A2/E/A/P
2000 l	AT02LC	/E: car/truck	AT06821/200/N*/A2/E/A/P
3000 l	AT02LC	/E: car/truck	AT06821/300/N*/A2/E/A/P
4000 l	AT02LC	/E: car/truck	AT06821/400/N*/A2/E/A/P
5000 l	AT02LC	/E: car/truck	AT06821/500/N*/A2/E/A/P

### Twin codes detail

AT06821	Tank capacity	Containment basin	Dispenser	Vehicles	Dispenser type	Installation
	/135: 1350 l /200: 2000 l /300: 3000 l /400: 4000 l /500: 5000 l	/V: with containment basin /N: without containment basin	/A2: Assytech AT02LC /A1: Assytech AT15 /H1: Wayne Helix 1000 /H2: Wayne Helix 6000 /OC: Tatsuno Ocean /SE: Tatsuno Shark Economy /SJ: Tatsuno Shark Junior /Q1: Tokheim Quantum 110 /Q5: Tokheim Quantum 510 /QM: Tokheim Quantum 510M /G1: Gilbarco SK700-2 /G2: Gilbarco SK700-2 car/lorry	/A: car /C: truck /E: car/truck	/S: single /D: double /A: alternate	/P: predisposition for dispenser /M: mounted dispenser provided by Assytech /C: mounted dispenser provided by customer

## ATGREEN SERIES ADBLUE® AND ELECTRIC ENERGY TANK DISPENSER



TANK DISPENSER ATGREEN with 2000 and 3000 l tanks. Galvanized steel frame, covered with smooth and insulated pre-painted panels, floor with anti-condensation insulation, load limiting valve with silenced / audible alarm, anti-siphon valve, forced ventilation and electric panel. Prepared for measuring probe for additive level and load from below. Containment basin and leak sensor on request (\* / V). Integrated brewing unit, ZVA approved nozzle, heated housing, electronic head without batteries, electronic meter without moving parts, MID approval for retail use, precision +/- 0,5%.

Power supply	400 VAC 22/30 kW L1-L2-L3-N-PE		
Output voltage	230-400 VAC / 150-500 VDC		
Power	22 kW AC / 30 kW DC		
Charging connector	AC TYPE 2 AC / CCS2 CC		
Tank capacity	AdBlue® dispenser	Electric dispenser	Code
2000 l	EC	AC	ATGREEN/200/N/EC/AC/SD/SD
3000 l	EC	AC	ATGREEN/200/N/EC/AC/SD/SD

### ATGREEN codes detail

ATGREEN	Tank capacity	Containment basin	AdBlue® dispenser	Electric dispenser	AdBlue® dispenser type	Electric dispenser type
	/200: 2000 l /300: 3000 l	/V: with containment basin /N: without containment basin	/GE: Volumetric industrial /EC: MID Comptometric	/AC: 22 kW AC /DC: 30 kW DC	/SD: single right /SS: single left /SF: single front /DD: double /AA: alternate /AD: alternate right /AS: alternate left /AF: alternate front	//SD: single right //SS: single left //SF: single front //DD: double

*Tank dispenser example of applicazione*



## ACCESSORIES FOR ADBLUE® TANK DISPENSER



Protection rollbar.

Description	Code
Protection rollbar	ATO03509



MAGNETIC ADAPTER FOR ENABLE for ZVA nozzles conforming to the ISO 2224-4 standard. To be used to allow delivery to tanks without this device.

Description	Code
Magnetic adapter for ZVA LV nozzle	AT17017
Magnetic adapter for ZVA HV nozzle	AT12506

## OPTIONS FOR ADBLUE® TANK DISPENSER



AUTOMATIC DELIVERY NOZZLE for UREA solution compatible for car and truck tanks, for filling station with attendant.

Flow rate	Version	Code
40 l/min	With magnet and swivel joint	AT003321
40 l/min	Without magnet, with swivel joint	AT003421



AUTOMATIC ZVA DELIVERY NOZZLE for UREA (AUS32) solutions, compatible with the ISO 22241-1 standard for vans / trucks and compatible with the ISO 22241-5 standard for cars.

Flow rate	Version	Code
5 l/min, 0,5-3,5 bar, - 20°C	ZVA (LV) for cars ISO22241-5	AT15616
40 l/min, 0,5-3,5 bar, - 20°C	ZVA (HV) for vans/trucks ISO22241-1	AT010413/1/M

Extra break-away for ZVA LV nozzle

Extra break-away for ZVA HV nozzle



QUICK COUPLER F 2". Complete with dust cap.

Description	Code
Quick coupler F 2"	AT12406



LOW FILLING KIT.

Description	Code
Low filling kit	AT09219





MECHANICAL OVERFILL LIMITER KIT consisting of ATE1640 DN 2" M/M AISI 304/PE 8 overfill prevention valve and a calm pipe in Geberit.

Description	Code
Mechanical overfill limiter kit	AT38206



HIGH LEVEL ALARM KIT with optical acoustic warning and silence button.

Description	Code
High level alarm kit	ATO16817



HIGH LEVEL ALARM KIT with thermistor.

Description	Code
High level alarm kit with thermistor	ATO12421



WEATHERPROOF LEVEL MEASUREMENT PROBE for additives.

Data transmission	RS485	
Measuring accuracy	+/- 0,5 mm	
Probe length	0150/0175/0200 mm	
<i>Description</i>	<i>Code</i>	<i>Codice</i>
Level measurement probe for additives		AT08919/A/XXXX



Start Veeder Root

WATER LEVEL MEASUREMENT PROBE for additives used with other suppliers' level management systems.

Data transmission	Probe length	Code
Start protocol	150 cm	AT-2-XSI1500GH-D1R0
Start protocol	175 cm	AT-2-XSI1750GH-D1R0
Veeder Root protocol	152 cm	AT-846367-602
Veeder Root protocol	183 cm	AT-846357-604



PRODUCT PREDETERMINATION KIT.

Version	Code
Single, single-side	AT32506/S/M
Single, double-side	AT32506/S/B
Double, single-side	AT32506/D/M
Double, double-side	AT32506/D/B



100 PULSES/LITRES KIT for parallel connection to management systems. Complete with CPU extension.

Description	Code
100 pulses/litres kit	AT05108



ANTI-SPILLING CONTAINMENT BASIN for tanks. Prevents product spreading in case of accidental loss.

Version	Code
Containment basin for Heavy Duty 2000 l tank	AT004918/2
Containment basin for Heavy Duty 3000 l tank	AT004918/3
Containment basin for Heavy Duty 5000 l tank	AT004918/5
Containment basin for Heavy Duty 11600 l tank	AT004918/11
Containment basin for LC 500 l tank	AT004818/05
Containment basin for LC 1000 l tank	AT004818/10
Containment basin for Shuttle 1350 l tank	AT004818/1
Containment basin for LC and Shuttle 2000 l tank	AT004818/2
Containment basin for LC and Shuttle 3000 l tank	AT004818/3
Containment basin for LC and Shuttle 4000 l tank	AT004818/4
Containment tank for Shuttle 5000 l tank	AT004818/5



LIQUID PRESENCE DETECTOR SENSOR. To combine with the containment tank for tanks. Connected to the electronic head of the dispenser it signals the possible presence of accidental leaks from the main tank.

Power supply	10-30 VDC
Consumption	50 mA
Description	Code
Liquid presence detector sensor	AT09119



FORCED VENTILATION with plus FPO filter, 230 V, 97 m3/h, 124x124 mm.

Description	Code
Forced ventilation	AT001617



INTERNAL HEATER from 0.75 kW to 2 kW with ambient temperature below 0° C. Complete with accessories.

Description	Code
Internal heater	AT001117



Front-port for temperatures below 20 °C

Description	Code
Front-port for low temperatures	ATO08619



Refrigeration system for tropical environments with an ecological gas compressor.

Description	Code
Air conditioner	AT11119



4-20 mA REPLICATOR that connected to the RS485 bus of the additive level measurement probes generates a 4-20 mA signal proportional to the height of the tank. To be used for connection to telemetry devices.

Power supply	12 VDC
Consumption	50 mA
Input/Output signal	RS485 / 4-20 mA
Description	Code
4-20 mA replicator	AT10208/K



RS485 SPLITTER for duplicating the digital signal of the level probe. To be used for connection to existing level control units with RS485 bus.

Power supply	12 VDC
Consumption	50 mA
Input/Output signal	RS485 / 4-20 mA
Description	Code
RS485 splitter	AT08208/K



RS232 DATA REMOTE CONNECTION.

Description	Code
RS232 data remote connection	AT06406



RS485 CPT/MODBUS DATA REMOTE CONNECTION.

Description	Code
RS485 CPT/MODBUS data remote connection	AT06606



DATA REMOTE CONNECTION / C. LOOP NUOVO PIGNONE.

Description	Code
Data remote connection / C. Loop Nuovo Pignone	AT06506



DATA REMOTE CONNECTION / C. LOOP NUOVO GILBARCO.

Description	Code
Data remote connection / C. Loop Gilbarco	AT29506



IFSF-LON DATA REMOTE CONNECTION.

Description	Code
IFSF-LON data remote connection	AT04615

## LIVERIES FOR TANK DISPENSER



AT006014/1/S  
AT006014/1/S/N



AT006014/1/D  
AT006014/1/D/N



AT006014/3/S  
AT006014/3/S/N



AT006014/3/D  
AT006014/3/D/N



AT006014/5/S  
AT006014/5/S/N



AT006014/5/D  
AT006014/5/D/N



AT006014/6/S  
AT006014/6/S/N



AT006014/6/D  
AT006014/6/D/N



AT006014/7/S  
AT006014/7/S/N



AT006014/7/D  
AT006014/7/D/N

**Version ... / . / N without Assytech adhesive**



# FUELS TREATMENT AND ANALYSIS



## FUEL FILTRATION DEVICE



Open frame



With housing

FILTRATION DEVICE designed to meet the conditions for supply of hydrocarbons heavy duty. It allows easy maintenance, cleaning and replacing the filter cartridge.

Filtration power 25 µm for diesel | 10 µm for gasoline

Cartridge	Product	Filtration power	Code
Separator	Diesel	25 µm	AT050/S/G
Absorbent	Diesel	25 µm	AT050/A/G
Only filtration	Diesel	25 µm	AT050/P/G
Separator	Gasoline	10 µm	AT050/S/B
Absorbent	Gasoline	10 µm	AT050/A/B*
Only filtration	Gasoline	10 µm	AT050/P/B

*Not usable with gasoline with Bioethanol*

Visual indicator of the presence of water	AT00914/V
Electronic indicator of the presence of water	AT00914/E
Differential manometer	AT01014
Mounting bracket	AT01114
Housing for external mounting	AT00714

### Filtration device example of application



## FIXED TANK WATER REMOVER



Non-modular version for a diesel fuel tank without additive tank



Version with up to 4 product tanks and with additive tank

DEPURGAS DIESEL WATER REMOVER used to eliminate water and sludge from the bottom of the tanks, filtration and separation for limiting the formation of the biomass, the main cause of the clogging the dispensers and vehicles filters. Possibility of automatic additive.

Power supply	230 VAC		
Max consumption	250 W		
Heater	300 W (optional (X1=R), absent (X1=N))		
Filtration degree	30 µm		
Model	Fixed (X2=F); Mobile (X2=M)		
Certification	RINA, UL, BW		
Flow rate	N° of tanks	Version	Code
700 l/h	1	Standard	AT19910/0700/1/S/X1/X2
700 l/h	2	Standard	AT19910/0700/2/S/X1/X2
700 l/h	3	Standard	AT19910/0700/3/S/X1/X2
700 l/h	4	Standard	AT19910/0700/4/S/X1/X2
700 l/h	1	With additive	AT19910/0700/1/A/X1/X2
700 l/h	2	With additive	AT19910/0700/2/A/X1/X2
700 l/h	3	With additive	AT19910/0700/3/A/X1/X2
700 l/h	4	With additive	AT19910/0700/4/A/X1/X2



FUELS CURATIVE AND PREVENTIVE ANTIBACTERIAL, against the formation of micro organisms in the fuel.

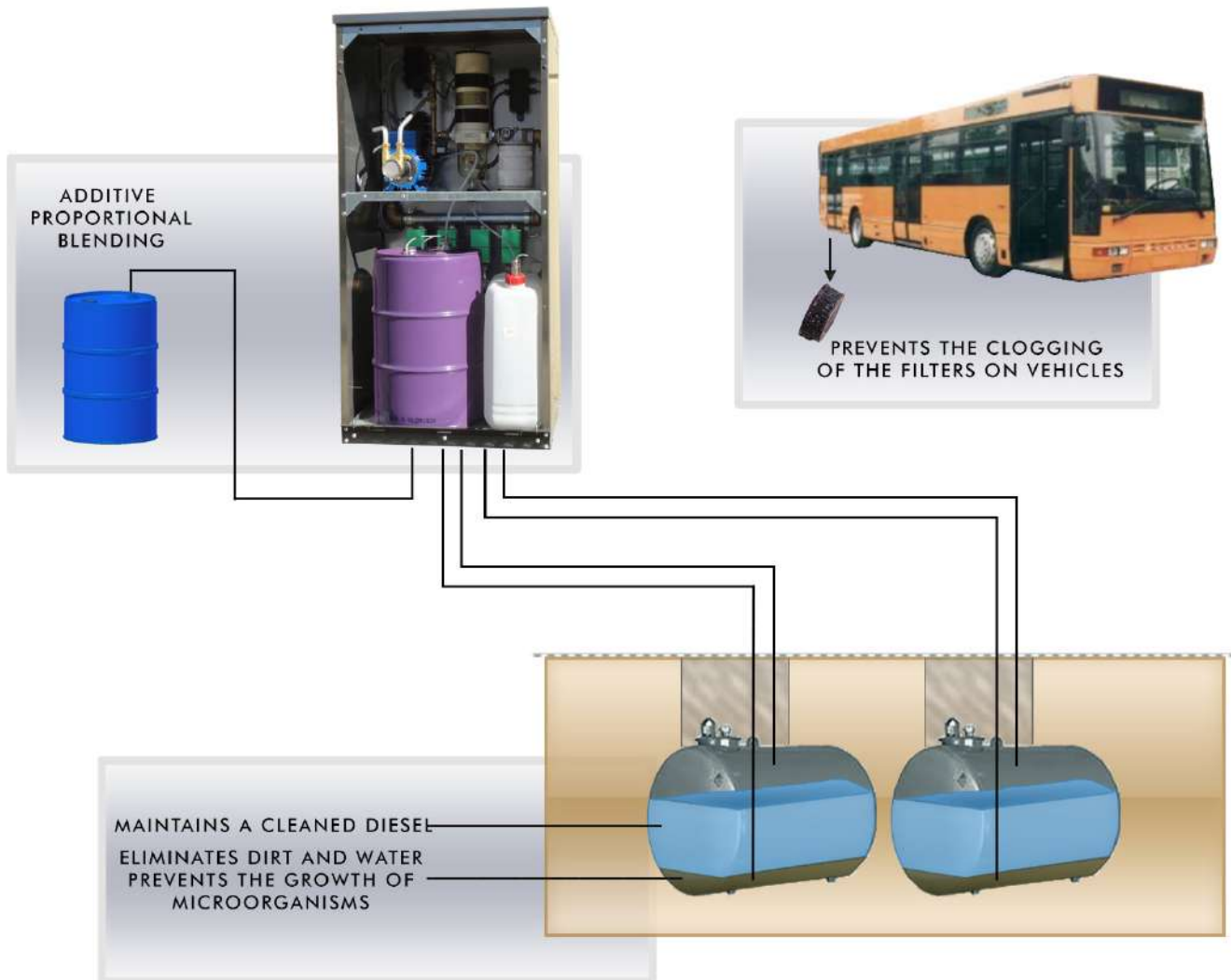
Packaging	10, 50, 250, 300, 2200 dl
Description	Code
Fuel antibacterial	AT051/N/XXXX (dl)
Additive level measuring gauge, 100 cm length	AT05310/A/0100

### Fuel water remover example of application





**Fuel water remover functional diagram**





## FUEL ADDITIVES DEVICE



ADLT16 SERIES FUELS ADDITIVE DEVICE used to mix diesel fuel with bactericidal or other additives, without having to perform manual transfer operations. This allows you to add a certain amount and systematic product in manual mode, presetting the quantity of product to be paid and in fully automatic mode, measuring the amount of product discharged.

The volume of diesel fuel is calculated by level measuring, with a suitable sensor, already present or to be installed inside the tank, or by a special AT12516 turbine kit to be added directly to the loading mouth of the tank.

Power supply		12 VDC, 230VAC with power adapter supplied	
Autonomy with internal battery		2-3 hours of additivation	
Absorption		25 W max	
Flow rate		25 l/h	
Accuracy		± 2,5%	
Product	Flow rate (l/h)	Version	Code
Diesel	25	Fixed	ADLT16/1/25/F
Diesel	25	Fixed for outdoor	ADLT16/1/25/E
Diesel	25	Mobile	ADLT16/1/25/C



230 VAC BATTERY CHARGER. For use with the ADLT16 fixed version.

Description	Code
230 VAC battery charger	AT14017



13.8 VDC 1 A BATTERY CHARGER. For use with the ADLT16 mobile version.

Description	Code
13.8 VDC 1 A battery charger	AT19216



MEASURING/ADDITIVATION KIT for 3" load.

Description	Code
Measuring/additivation kit for 3" load	AT12516



25 L PLASTIC WHITE TANK. For use with the ADLT16 mobile version.

Description	Code
25 L tank	AT20216



USB/TTL CONVERTER for PC/ADLT16 connection.

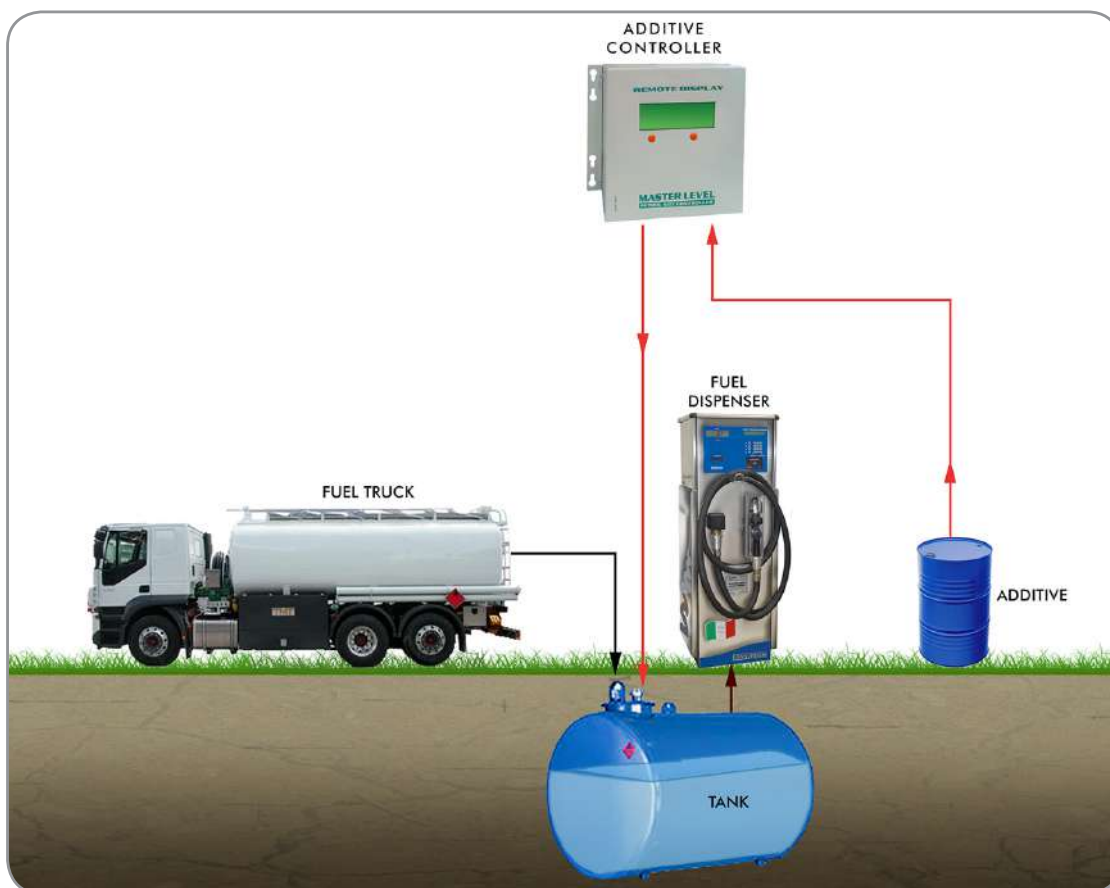
Description	Code
USB/TTL converter	AT09108/UT/A



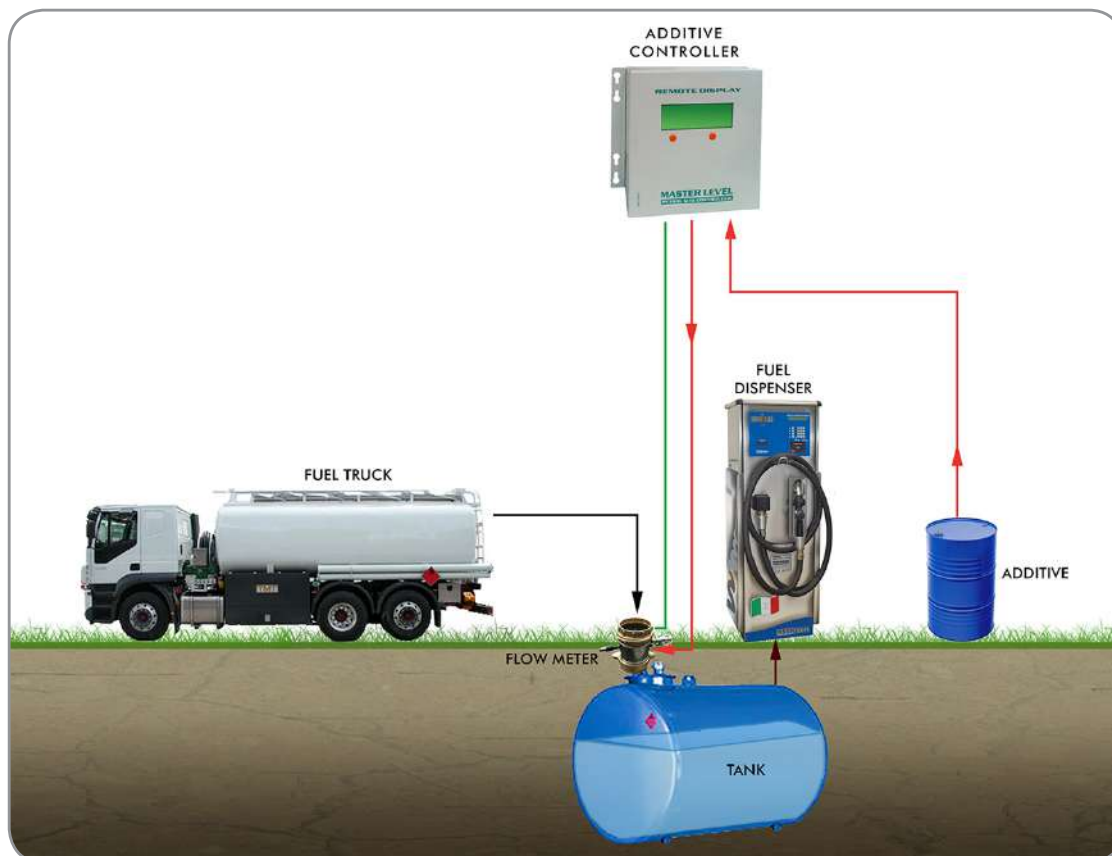
GSETUP SOFTWARE for programming ADLT16.

Description	Code
GSETUP software	ATS01811

***Fixed manual version example of application***



***Automatic with meter version example of application***



## VEHICLE TANKS CLEANER



MOBILE UNIT WITH PNEUMATIC PUMP for filtering tanks without removing the product from the inside.

Max flow rate	100 l/min
Max prevalence	70 m
Max air pressure power supply	6 bar (90 P.S.I.)
Primary filtration capacity	60 µm
Secondary filtration capacity (microfiltration)	10 µm (5 µm on request)
ATEX marking	Zone 2: II 3/3GD c IIB T 135°C (Diesel) Zone 1: II 2/2GD c IIB T 135°C (Gasoline/Kerosene)

Flow rate	Product	Zone	Meter	Code
100 l/min	Gasoline	1	Absent	AT11611/100/A/1/S
100 l/min	Diesel	2	Absent	AT11611/100/A/2/S
100 l/min	Diesel	2	Absent	AT11611/100/A/2/M



MOBILE UNIT WITH ELECTRIC PUMP for filtering tanks without removing the product from the inside.

Flow rate	70 ÷ 150 l/min (depending on the model)
Max pressure	1,4 (070); 1,7 (/100); 3 bar (/150)
Primary filtration capacity	100 µm
Secondary filtration capacity (microfiltration)	20 µm (10 µm on request)

Flow rate	Product	Zone	Meter	Code
70 l/min	Diesel	2	Absent	AT11611/070/E/2/S
70 l/min	Diesel	2	Present	AT11611/070/E/2M
100 l/min	Diesel	2	Absent	AT11611/100/E/2/S
100 l/min	Diesel	2	Present	AT11611/100/E/2/M
150 l/min	Diesel	2	Absent	AT11611/150/E/2/S
150 l/min	Diesel	2	Present	AT11611/150/E/2/M
200 l/min	Diesel	2	Absent	AT11611/200/E/2/S

### Mobile unit example of application



## FUEL ANALYSIS STATION



OIL, FUEL ANALYSIS STATION to be used with specials quality sensors for the detection of the main characteristics of the fuel / oil (Temperature, Viscosity, Dielectric Constant, Product Type, Density).

Power supply	15 VCC (100÷240 VCA through supplied power supply)
Consumption	30 W max
Operating temperature	-10°C ÷ +30°C
Dimensions	275X124H175 mm
Version	Code
With Can Bus interface	AT12416/C
With Can Bus and Bluetooth® interfaces	AT12416/B



OIL, FUEL AND BACTERIOLOGICAL CONTAMINATIONS ANALYSIS STATION for culture bacteria, molds, yeasts in samples taken from the diesel fuel storage tanks, directly on the service station. Also through the specials quality sensors it is possible to detect the main characteristics of the fuel/oil (Temperature, Viscosity, Dielectric Constant, Product Type, Density).

Power supply	15 VCC (100÷240 VCA through supplied power supply)
Consumption	30 W max
N° of test tubes	6
Operating temperature	-10°C ÷ +30°C
Dimensions	275X166H128,5 mm
Version	Code
Base	AT08915/S
With Can Bus interface	AT08915/C
With Can Bus and Bluetooth® interfaces	AT08915/B

### Accessories for oil and fuel analysis station



OIL, FUEL ANALYSIS KIT with a quality sensor for the detection of the main product characteristics such as Temperature in °C, Viscosity in cP, Dielectric constant, Density in gm/cc and Density at 15 °C in gm/cc, support, 2 60 cc collection jars and 200 ml L-15 isopropyl alcohol spray.

Description	Code
Product analysis kit complete of AT121915/01 sensor	AT22115/01



FUEL QUALITY SENSOR complete of 1 m cable and M12 connector (for analysis station equipped with Can Bus interface) for the detection of the main characteristics such as Temperature in °C, Viscosity, Dielectric Constant, Density in gm/cc and Density at 15 °C in gm/cc).

Description	Code
Product quality sensor	AT21915/01
Support for quality sensors	AT15215





PRINTER KIT consists of Bluetooth® interface (to be installed in the fuels analysis station), Bluetooth® printer, battery charger and 10 rolls of paper for the printing of the main product characteristics.

Description	Code
Bluetooth® printer kit	AT22415



BLUETOOTH® PRINTER complete of charging batteries and 10 rolls of paper for the printing of the main product characteristics. To be used with the analysis station equipped with Bluetooth® interface.

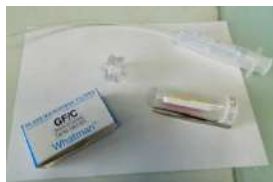
Description	Code
Bluetooth® printer	AT00414



ANALYSIS STATION/PC CONNECTION KIT complete of AT14116 splitter, TTL-RS232/USB converter cable and AT14216 M12FM5P connection cable.

Description	Code
Analysis station/PC connection kit	AT13916

## Consumables



BACTERIOLOGICAL ANALYSIS KIT. It allows to check for bacteria, yeasts and molds in a light hydrocarbon sampling, diesel/naphtha/GNR.

Packaging	10 test tubes + accessories
Description	Code
10 test tubes and accessori for bacteriological analysis	AT09015



60 CC PLASTIC JAR for sampling.

Description	Code
60 cc jar for sampling (10 pieces)	AT16215



200 ML L-15 SPRAY ISOPROPYL ALCOHOL.

Description	Code
200 ml spray isopropyl alcohol	AT05416



PAPER ROLL for Bluetooth® printer, width 57 mm, diameter 30 mm. (Pack 10 pieces).

Description	Code
Paper roll Ø30X57 mm (10 pieces)	AT12415

[illegible]

# ECOLOGICAL LINE



## WDS16 SERIES WATER DETECTOR SYSTEM



1 sensor, wall version



4 sensors, wall version

DEVICE FOR DETECTING THE PRESENCE OF CONDUCTIVE FLUIDS inside of oils or diesel. It detects the presence of water from 1 mm to 100 mm from the bottom through special sensors. Fixed to the wall version with remote connection to the fuel level control units AT series already present in the system.

Power supply 1 sensor version	Battery 9Vdc (included)	
Power supply 4 sensors version	Trough power supply unit 12 Vdc 250 mA (included)	
Autonomy with battery	> 5.000 readings	
Sensibility	1 mm	
Max reading	50 mm	
Serial connection	RS232	
Dimensions	H 80, P 120 mm	
Product	Version	Code
Diesel	1 sensor, wall version	WDS16/1/1/00
Diesel	4 sensors (Multitank), wall version	WDS16/1/4/00

### Accessories for WDS16 series device



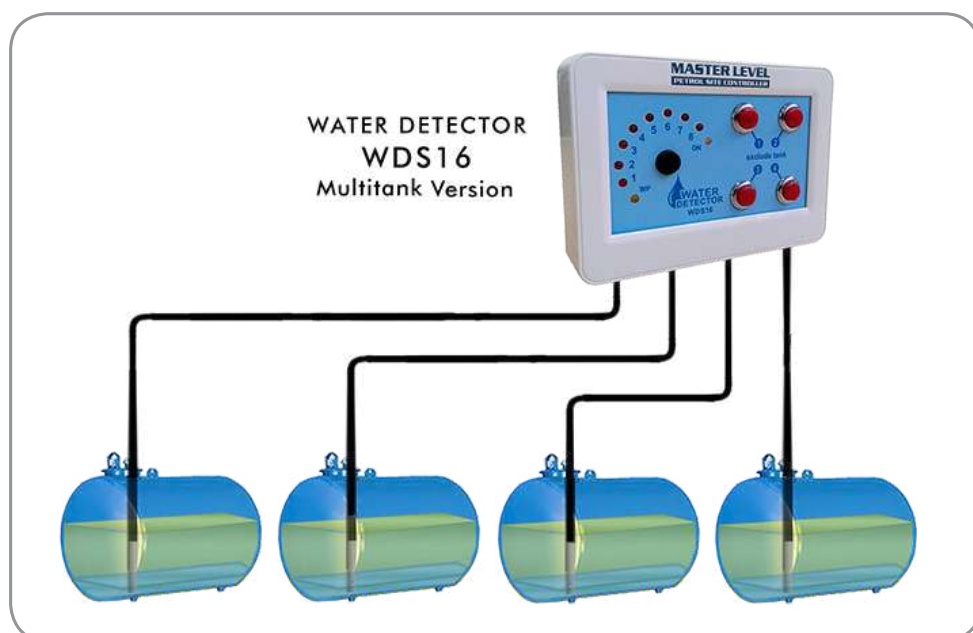
WATER SENSOR with cable length of 5 (05), 10 (10) 15 (15) or 20 (20) meters.

Cable length	Code
5 m	AT13116/05
10 m	AT13116/10
15 m	AT13116/15
20 m	AT13116/20



200 ML SPRAY ALCOHOL ISOPROPYLIC for cleaning the sensor.

Description	Code
200 ml spray alcohol isopropylc	AT05416





## VP16 SERIES WASTEWATER SUCTION EQUIPMENT



IP54 version with peristaltic pump

VP16 WASTEWATER ASPIRATOR for containment vessels. It integrates a sensor that detects the presence of liquid to be aspirated and provides to start the pump until the complete emptying of the same automatically.

Power supply	12 VCC / 24 VCC / (depending on the model) 230 VAC power adapter supplied
Consumption	15 W
Suction pumps	1 / 2 (depending on the model), external for OEM model
Flow rate	10 l/h / 15 l/h (depending on the model)
Max pressure	2 bar
Alarm inputs	1
Alarm outputs	2
Serial data communication	RS232/RS485
Auxiliary data communication	LAN, GSM/GPRS
Operating temperature	-10°C ÷ +40°C
Material	Stainless steel, polycarbonate (IP54)
Dimensions	208X99H308 mm (stainless steel /S-D) 193X166H230 mm (IP54 with peristaltic pump /I-P) 140X135H230 mm (IP54 without peristaltic pump /O)

Model	Flow rate(l/h)	Power supply	Code
OEM, IP54	0 l/h*	12 VDC / 24 VDC	VP16/O/00/012 (024)
Single	10 l/h	12 VDC / 24 VDC	VP16/S/10/012 (024)
Double	10 l/h	12 VDC / 24 VDC	VP16/D/10/012 (024)
Single, IP54	10 l/h	12 VDC / 24 VDC	VP16/I/10/012 (024)
Double, IP54	10 l/h	12 VDC / 24 VDC	VP16/P/10/012 (024)
Single	15 l/h	12 VDC / 24 VDC	VP16/S/15/012 (024)
Double	15 l/h	12 VDC / 24 VDC	VP16/D/15/012 (024)
Single, IP54	15 l/h	12 VDC / 24 VDC	VP16/I/15/012 (024)
Double, IP54	15 l/h	12 VDC / 24 VDC	VP16/P/15/012 (024)

(\*) External pump

### Example of application aspirator equipment



Depurgas  
AT19910

Leak control  
LDS08

Waste water aspirator for  
underground wells CM10

**Accessories for VP16 series wastewater suction equipment**



Stainless steel version



Plastic version

WASTEWATER CONTAINMENT VASSEL, complete of suction and overfilling.			
Volume	20 L	16 L	16 L
Inputs	6	6	6
Material	Stainless steel	Stainless steel	Plastic
Dimensions	440X265 H329 mm	316X250 H430 mm	330X215 H350 mm
Capacity	Material	Code	
20 L	Stainless steel	AT02116	
16 L	Acciaio inox	AT03416	
16 L	Plastic	AT03516	



ATEX, MINIATURIZED SWITCH made in stainless steel used for the detection of the high level in the containment vessel, complete with mounting kit.		
Marking	ATEX II 1G Ex ma IIC T6 Ga	
Description	Code	
ATEX miniaturized high level switch	AT02716	



IP68, MINIATURIZED SWITCH made in nylon used for the detection of the high level in the containment vessel, complete with mounting kit.		
Protection	IP68	
Version	Code	
Vertical	AT02616/V	
Horizontal	AT02616/O	
PUR 4X0.34 mm <sup>2</sup> , 5 m cable, for AT02616 switch		AT07712/5



HYDRAULIC CONNECTION KIT complete of quick coupler, tap, non-return valve and hose connector. It is connected through hose connector to the delivery line of the recovered liquid.	
Description	Code
Hydraulic connection kit	AT02516



USB/TTL CONVERTER for PC/VP16 connection.	
Description	Code
USB/TTL convert	AT09108/UT/A



SOFTWARE GSETUP for programming the VP16 aspirators.	
Description	Code
GSETUP software	ATS01811

## CM10 SERIES WATER SUCTION EQUIPMENT



"S" version



"H" version

CM10 SERIES WATER SUCTION EQUIPMENT FOR TANK WHEELS. It monitors the presence of liquids inside one or more underground wells and, if present, aspirates and expels them by sending them to the disinfectant or to a storage tank. Each tank (max 4) is controlled by a dedicated aspirator (VP16/I o VP16/O).

Power supply	230 VAC 100 W
Suction pumps	1/2/3/4 (depending on the model, max 2 for high flow version)
Flow rate	30 l/h; 174 l/h high flow version
Max pressure	2 bar
Alarm inputs	1
Alarm outputs	2
Serial data communication	RS232/RS485
Auxiliary data communication	LAN, GSM/GPRS
Operating temperature	-10°C ÷ +50°C
Material	Fiberglass

Monitorable pipes	Version	Code
1	Without activated carbon filter	CM10/1/S
2	Without activated carbon filter	CM10/2/S
3	Without activated carbon filter	CM10/3/S
4	Without activated carbon filter	CM10/4/S
1	With activated carbon filter	CM10/1/F
2	With activated carbon filter	CM10/2/F
3	With activated carbon filter	CM10/3/F
4	With activated carbon filter	CM10/4/F
1	High flow, without activated carbon filter	CM10/1/H
2	High flow, without activated carbon filter	CM10/2/H

### Accessories for CM10 series suction equipment



ATEX, MINIATURIZED FLOAT SWITCH made in stainless steel used for the detection of the high level in the containment vessel, complete with mounting kit.

Marking	ATEX II 1G Ex ma IIC T6 Ga
Description	Code
ATEX miniaturized high level float switch	AT02716



HYDRAULIC CONNECTION KIT with 6X8 foot fitting.

Description	Code
Hydraulic connection kit	AT21116/K



USB/TTL CONVERTER for PC/VP16 connection.

Description	Code
Convertitore USB/TTL	AT09108/UT/A



SOFTWARE GSETUP for programming the VP16 aspirators.

Description	Code
GSETUP software	ATS01811





# DEVICES FOR LEAKS, ALARMS DETECTION AND MONITORING



## FUNDAMENTAL REQUIREMENTS OF THE EUROPEAN STANDARD EN13160 (\*)

which governs the construction of leak detection systems in tanks and pipelines installed on service stations

(\*) Harmonized standard for the implementation of the 2014/34/EU-ATEX Directive

An optical visible indication GREEN colour must signal the good functioning of the equipment

An optical visible indication RED colour must signal the presence of an alarm

A silenceable ACOUSTIC alarm must alert of the presence of an alarm

Tank pressure must be at least 30 mbar above the hydrostatic head of the stored product  
200 ÷ 330 mBar

With static depression, only one control pipe (red) and a test tap on the tank are sufficient

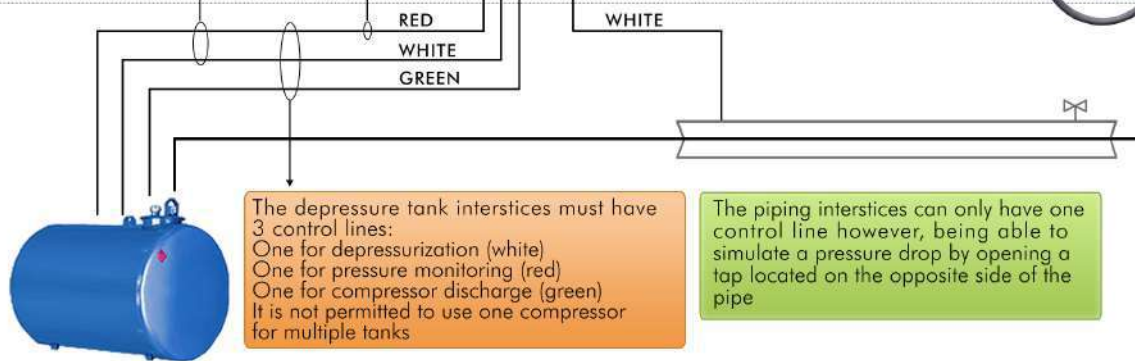
The pressure tank interstices must have 2 control lines: one for pressurisation (white) and one for pressure monitoring (red)

MUST SATISFY THE REQUIREMENTS OF THE ATEX STANDARD

NON-HAZARDOUS AREA

HAZARDOUS AREA  
(EN 60079-10)  
(Zone 1)

Pressure in the piping interstices must be at least 1 bar higher than maximum operating pressure of the pump.  
1 bar for suction pump  
3,5 bar for submersible pump



## LDS08C/P LEAKS CONTROL DEVICE WITH COMPRESSORS (STANDARD VERSION)

CONFORM TO THE STANDARD EN 13160 ATEX II 2G CERTIFICATE IP44

Operating temperature -10 °C to + 40 °C (temperatures below -10 °C with an additional heater).  
Complete of operating and alarm external signaling and test and silencing push button.



LEAKS CONTROL DEVICE FOR TANKS INTERSTICE (low pressure (L)). Complete with electronic control unit, siren, red/green light and accessories.		
Pressure	350 mbar	
Dimensions	540X310H1160 mm	
Number of pipes	Number of tanks	Code
00	04	LDS08C/P/N/L/00/04
00	06	LDS08C/P/N/L/00/06



LEAKS CONTROL DEVICE FOR TANKS INTERSTICE (low pressure (L)). Complete of electronic control unit, siren, red/green light and accessories.		
Pressure	350 mbar	
Dimensions	540X310H1490 mm	
Number of pipes	Number of tanks	Code
00	08	LDS08C/P/N/L/00/08
00	10	LDS08C/P/N/L/00/10
00	12	LDS08C/P/N/L/00/12
00	18	LDS08C/P/N/L/00/18



LEAKS CONTROL DEVICE FOR PIPING IN SUCTION INTERSTICE (medium pressure compressor (M), 1 bar pressure pump). Complete with electronic control unit, siren, red/green light and accessories.		
Pressure	1000 mbar	
Dimensions	540X310H1160 mm	
Number of pipes	Number of tanks	Code
04	00	LDS08C/P/M/N/04/00
06	00	LDS08C/P/M/N/06/00
08	00	LDS08C/P/M/N/08/00
10	00	LDS08C/P/M/N/10/00
12	00	LDS08C/P/M/N/12/00



LEAKS CONTROL DEVICE FOR PIPING IN SUCTION INTERSTICE (medium pressure compressor (M), 1 bar pressure pump). Complete with electronic control unit, siren, red/green light and accessories.		
Pressure	1000 mbar	
Dimensions	540X310H1490 mm	
Number of pipes	Number of tanks	Code
18	00	LDS08C/P/M/N/18/00
24	00	LDS08C/P/M/N/24/00
30	00	LDS08C/P/M/N/30/00
36	00	LDS08C/P/M/N/36/00
42	00	LDS08C/P/M/N/42/00





LEAKS CONTROL DEVICE FOR PIPING IN PRESSURE INTERSTICE (high pressure compressor (H), 4 bar pressure submersible pump). Complete with electronic control unit, siren, red/green light and accessories.

Pressure	3500 mbar	
Dimensions	540X310H1490 mm	
Number of pipes	Number of tanks	Code
04	00	LDS08C/P/H/N/04/00
06	00	LDS08C/P/H/N/06/00
08	00	LDS08C/P/H/N/08/00
10	00	LDS08C/P/H/N/10/00
12	00	LDS08C/P/H/N/12/00
18	00	LDS08C/P/H/N/18/00
24	00	LDS08C/P/H/N/24/00
30	00	LDS08C/P/H/N/30/00
36	00	LDS08C/P/H/N/36/00
42	00	LDS08C/P/H/N/42/00



LEAKS CONTROL DEVICE FOR PIPING IN SUCTION AND TANKS INTERSTICES (medium pressure compressor for piping (M) and low pressure for tanks(L)). Complete with electronic control unit, siren, red/green light and accessories.

Pressure	Pipes 1000 mbar, tanks 350 mbar	
Dimensions	540X310H1490 mm	
Number of pipes	Number of tanks	Code
06	06	LDS08C/P/M/L/06/06
12	06	LDS08C/P/M/L/12/06
18	06	LDS08C/P/M/L/18/06
24	06	LDS08C/P/M/L/24/06
30	06	LDS08C/P/M/L/30/06
06	12	LDS08C/P/M/L/06/12
12	12	LDS08C/P/M/L/12/12
18	12	LDS08C/P/M/L/18/12



LEAKS CONTROL DEVICE FOR PIPING IN SUCTION AND TANKS INTERSTICES (high pressure compressor for piping (H) and low pressure for tanks(L)). Complete with electronic control unit, siren, red/green light and accessories.

Pressure	Pipes 3500 mbar, tanks 350 mbar	
Dimensions	540X310H1490 mm	
Number of pipes	Number of tanks	Code
06	06	LDS08C/P/H/L/06/06
12	06	LDS08C/P/H/L/12/06
18	06	LDS08C/P/H/L/18/06
24	06	LDS08C/P/H/L/24/06
30	06	LDS08C/P/H/L/30/06
06	12	LDS08C/P/H/L/06/12
12	12	LDS08C/P/H/L/12/12
18	12	LDS08C/P/H/L/18/12



Options for LDS08C/P series leaks control device

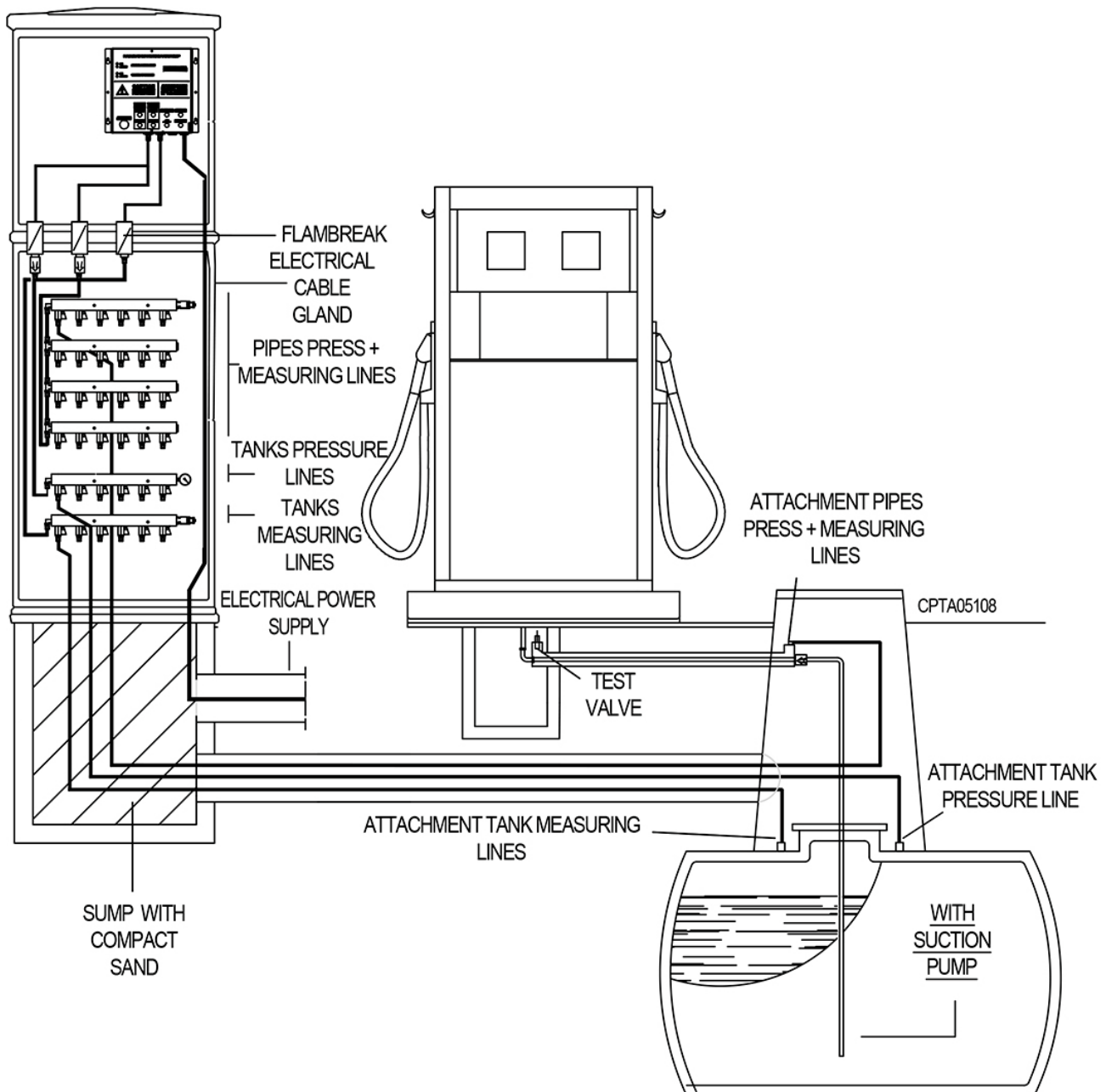


GPRS MODEM complete of 900÷1800 MHz antenna. To manage data and alarms via GPRS connection. It also makes it possible to send SMS messages and read information via mobile phone.

Description	Code
GPRS MODEM complete of 900÷1800 MHz antenna with magnetic base	AT06706

Firmware for telemetry	ATS03313
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LDS08/P series leaks control device functional diagram



## LDS08C/S STATIC LEAKS CONTROL DEVICE (STANDARD VERSION)



STATIC IN DEPRESSURE LEAKS CONTROL DEVICE FOR TANKS INTERSTICE. Complete with electronic control unit, siren, red/green lights and accessories.

Dimensions		540X310H1160 mm	
Number of pipes	Number of tanks	Vacuum gauge	Code
00	02	Absent	LDS08C/S/N/V/00/02
00	03	Absent	LDS08C/S/N/V/00/03
00	04	Absent	LDS08C/S/N/V/00/04
00	05	Absent	LDS08C/S/N/V/00/05
00	06	Absent	LDS08C/S/N/V/00/06
00	07	Absent	LDS08C/S/N/V/00/07
00	08	Absent	LDS08C/S/N/V/00/08
00	02	Present	LDS08C/S/N/V/00/02/V
00	03	Present	LDS08C/S/N/V/00/03/V
00	04	Present	LDS08C/S/N/V/00/04/V
00	05	Present	LDS08C/S/N/V/00/05/V
00	06	Present	LDS08C/S/N/V/00/06/V
00	07	Present	LDS08C/S/N/V/00/07/V
00	08	Present	LDS08C/S/N/V/00/08/V



STATIC IN PRESSURE LEAKS CONTROL DEVICE FOR TANKS INTERSTICE. Complete with electronic control unit, siren, red/green lights and accessories.

Dimensions		540X310H1160 mm	
Number of pipes	Number of tanks	Manometer	Code
00	02	Absent	LDS08C/S/N/P/00/02
00	03	Absent	LDS08C/S/N/P/00/03
00	04	Absent	LDS08C/S/N/P/00/04
00	05	Absent	LDS08C/S/N/P/00/05
00	06	Absent	LDS08C/S/N/P/00/06
00	07	Absent	LDS08C/S/N/P/00/07
00	08	Absent	LDS08C/S/N/P/00/08
00	02	Present	LDS08C/S/N/P/00/02/M
00	03	Present	LDS08C/S/N/P/00/03/M
00	04	Present	LDS08C/S/N/P/00/04/M
00	05	Present	LDS08C/S/N/P/00/05/M
00	06	Present	LDS08C/S/N/P/00/06/M
00	07	Present	LDS08C/S/N/P/00/07/M
00	08	Present	LDS08C/S/N/P/00/08/M

Siren, red/green light, button, AT11309 board and accessories kit

AT07310

## LDS08C/S STATIC LEAKS CONTROL DEVICE (DESIGNED TO BE MANAGED BY REMOTE SYSTEMS, WHICH TELEMETRY, ETC.)



STATIC DEPRESSURE LEAKS CONTROL DEVICE FOR TANKS INTERSTICE. Complete with electronic control unit, siren, red/green lights and accessories.			
Dimensions		540X310H1160 mm	
Number of pipes	Number of tanks	Vacuum gauge	Code
00	02	Assente	LDS08C/T/N/V/00/02
00	03	Assente	LDS08C/T/N/V/00/03
00	04	Assente	LDS08C/T/N/V/00/04
00	05	Assente	LDS08C/T/N/V/00/05
00	06	Assente	LDS08C/T/N/V/00/06
00	07	Assente	LDS08C/T/N/V/00/07
00	08	Assente	LDS08C/T/N/V/00/08
00	02	Presente	LDS08C/T/N/V/00/02/V
00	03	Presente	LDS08C/T/N/V/00/03/V
00	04	Presente	LDS08C/T/N/V/00/04/V
00	05	Presente	LDS08C/T/N/V/00/05/V
00	06	Presente	LDS08C/T/N/V/00/06/V
00	07	Presente	LDS08C/T/N/V/00/07/V
00	08	Presente	LDS08C/T/N/V/00/08/V



STATIC PRESSURE LEAKS CONTROL DEVICE FOR TANKS INTERSTICE. Complete with electronic control unit, siren, red/green lights and accessories.			
Dimensions		540X310H1160 mm	
Number of pipes	Number of tanks	Manometer	Code
00	02	Assente	LDS08C/T/N/P/00/02
00	03	Assente	LDS08C/T/N/P/00/03
00	04	Assente	LDS08C/T/N/P/00/04
00	05	Assente	LDS08C/T/N/P/00/05
00	06	Assente	LDS08C/T/N/P/00/06
00	07	Assente	LDS08C/T/N/P/00/07
00	08	Assente	LDS08C/T/N/P/00/08
00	02	Presente	LDS08C/T/N/P/00/02/M
00	03	Presente	LDS08C/T/N/P/00/03/M
00	04	Presente	LDS08C/T/N/P/00/04/M
00	05	Presente	LDS08C/T/N/P/00/05/M
00	06	Presente	LDS08C/T/N/P/00/06/M
00	07	Presente	LDS08C/T/N/P/00/07/M
00	08	Presente	LDS08C/T/N/P/00/08/M

Siren, red/green light, push button, AT11309 board and accessories kit

AT07310



GPRS MODEM complete of 900÷1800 MHz antenna. To manage data and alarms via GPRS connection. It also makes it possible to send SMS messages and read information via mobile phone.

Description	Code
GPRS MODEM complete of 900÷1800 MHz antenna with magnetic base	AT06706

## ACCESSORIES FOR LDS08C LEAKS CONTROL DEVICE



ATEX HEATER KIT for use with temperatures below -10 ° C.

Power supply 230 VCA

Power 50 W

*Description*

*Code*

ATEX heater kit

AT09308



LOCAL SIGNALLING SYSTEM with xenon red colour lamp.

Frequency 1 Hz

Protection degree IP67

*Description*

*Code*

Local signalling system

AT17401/R



REMOTE SIGNALLING SYSTEM with xenon red colour lamp complete of wiring kit.

Protection degree IP65

*Description*

*Code*

Remote signalling system

AT11012/R



MANOMETERS FOR SINGLE PIPES.

*Pressure*

*Full-scale*

*Code*

1 bar

2,5 bar

ATE12508

4 bar

6 bar

ATE10608



MANOMETERS FOR SINGLE TANK 300 mbar.

Full-scale 1 bar

*Description*

*Code*

Manometers for single tank 300 mbar

ATE07008



FITTING WITH OGIVE complete with core for 6X4 copper pipe.

*Description*

*Code*

Fitting with ogive

AT20513



VACUUM PUMP for static leak control devices.

*Version*

*Code*

Pneumatic

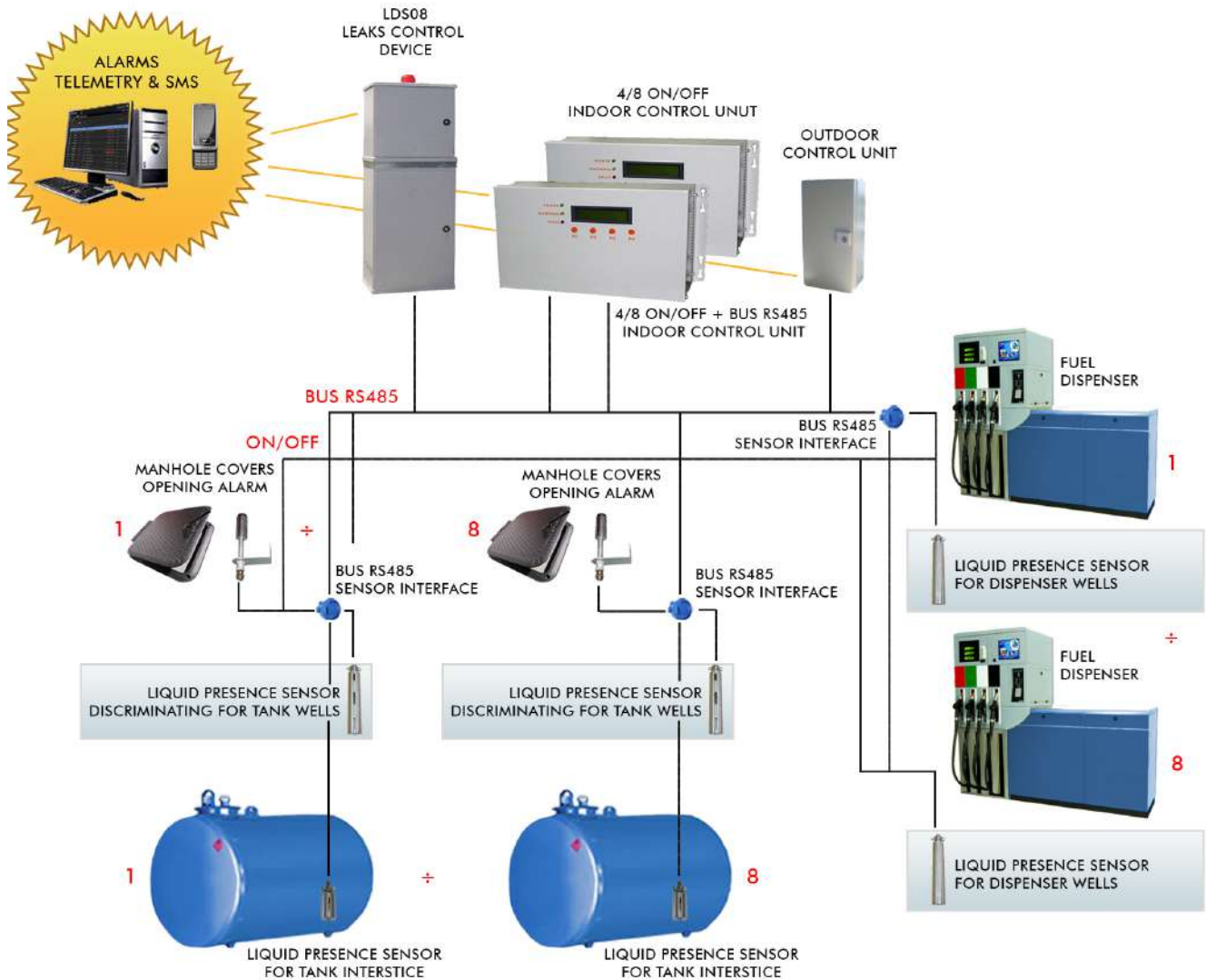
AT06317/P

Electric

AT06317/E



**LDS08 series leaks control device funcional diagram**



## LDS09 SERIES LEAKS CONTROL DEVICES



LEAKS CONTROL DEVICE for interstices in storage tanks and suction piping for dispensing units.

Power supply	100÷240 VAC ± 15%
Consumption	5÷15 W
Monitorable pipes	1 and up 24 with specifics manifolds
Monitorable tanks	1 and up 18 with specifics manifolds
Control pressure	Code
0,1÷0,5 bar (300 mbar) - Low Pressure	LDS09/L
0,5÷1,5 bar (1000 mbar) - Medium Pressure	LDS09/M
-0,1÷-0,5 bar (-350 mbar) - Vacuum	LDS09/V

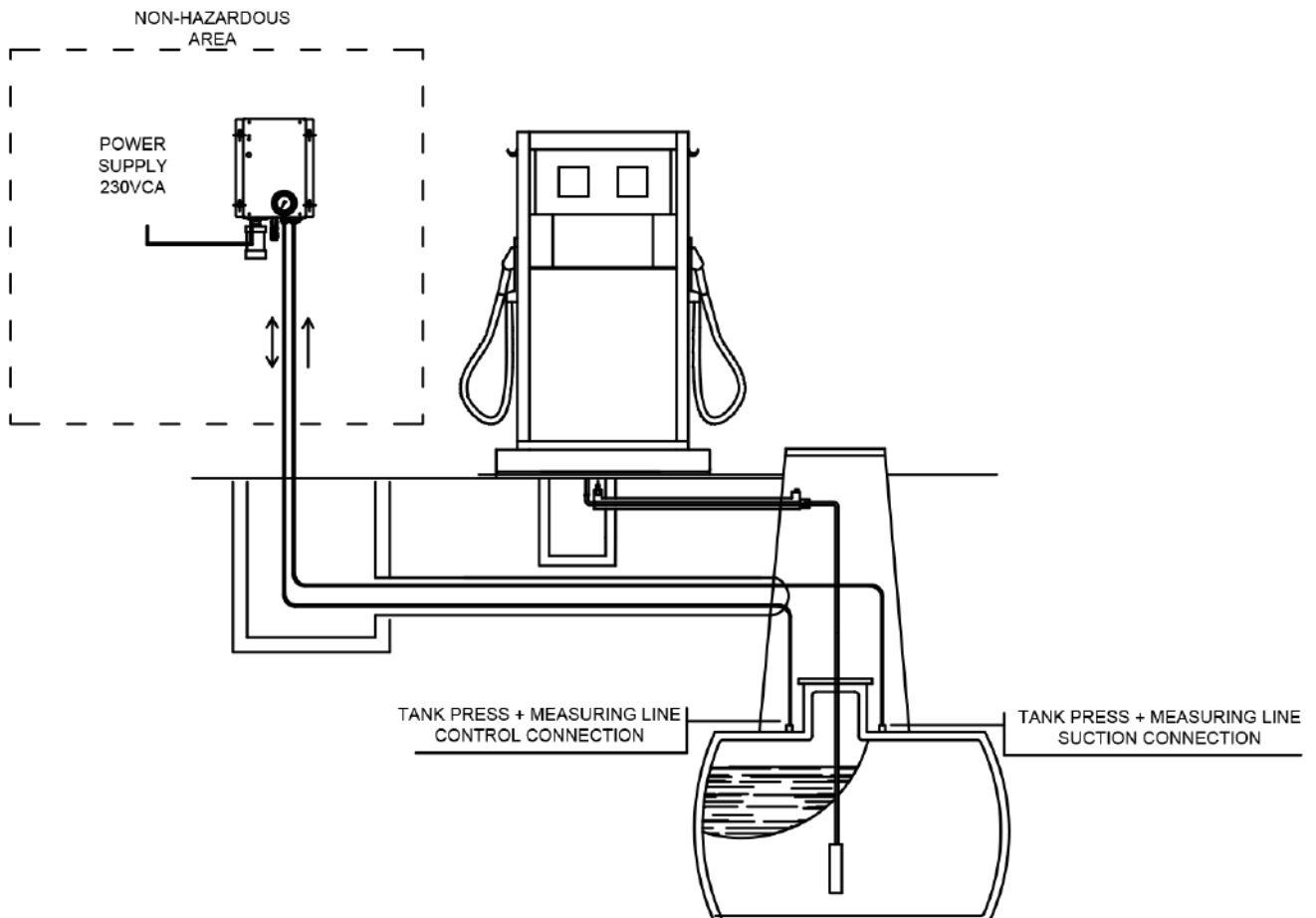
### Options for LDS09 series leaks control device



GSM/GPRS MODEM complete of 900÷1800 MHz antenna. To manage data and alarms via GSM connection. It also makes it possible to send SMS messages and read information via mobile phone.

Description	Code
GSM/GPRS MODEM complete of 900÷1800 MHz antenna with magnetic base	AT06706

### LDS09 series leaks control device functional diagram



## TELEMETRY EQUIPMENT

Devices for sending remote alarms. They can be used in stand alone mode by sending a simple SMS or connected to operating units using the M2M circuit.



ALARMS MANAGEMENT CONTROL UNIT FOR INTERNAL USE. The system in the telemetry version can be configured to fulfill a variety of functions (monitoring, reporting, alarm, etc.) depending on the features and requirements of the system.

Power supply		12÷24 VDC or 110÷230 VAC	
Overvoltage protection	Power supply	Battery	Code
No	12÷24 VCC	No	AT00419/1/1/N
Yes	100÷230 VAC	No	AT00419/2/2/N



ALARMS MANAGEMENT CONTROL UNIT FOR INTERNAL USE. The system in the telemetry version can be configured to fulfill a variety of functions (monitoring, reporting, alarm, etc.) depending on the features and requirements of the system.

Power supply		230 VCA 5 W	
Sensors	Type	Version	Code
4	Explosion proof	Basic	AT20801/04/A*
8	Explosion proof	Basic	AT20801/08/A*
16	Explosion proof	Basic	AT20801/16/A*
4	Explosion proof	For telemetry	AT39102/04/IA/A
8	Explosion proof	For telemetry	AT39102/08/IA/A

\* It does not allow the use of the GSM modem



ALARMS MANAGEMENT CONTROL UNIT FOR EXTERNAL USE with GPRS modem.

Power supply		100÷240 VCA / 5 ÷ 20 W	
Sensors	Type	Version	Code
4	Explosion proof	For telemetry	AT27903/G/E/4
8	Explosion proof	For telemetry	AT27903/G/E/8

Note: For telemetry available services, refer to the "TELEMETRY SYSTEMS"

### Options for telemetry



GSM/GPRS MODEM complete of 900÷1800 MHz antenna. To manage data and alarms via GSM connection. It also makes it possible to send SMS messages and read information via mobile phone.

Description	Code
GSM/GPRS MODEM complete of 900÷1800 MHz antenna with magnetic base	AT06706

Retrofit kit for AT27903 control units to be installed on WTS cabinets

AT06809

Retrofit kit for AT27903 control units to be installed on Tokheim cabinets

AT06909

### Accessories for telemetry



ELECTRO ACOUSTIC SIGNAL DEVICE for outdoor use.

Description	Code
Remote alarm	AT15507





# LEVEL MONITORING CONTROL UNITS, MEASURING GAUGES AND LEAK DETECTION SENSORS



## COMPACT, STAND ALONE, MASTER LEVEL SERIES TANK MONITORING CONTROL UNITS FOR WATERPROOF GAUGES

### VERSION FOR 2 WATERPROOF DIGITAL MEASUREMENT GAUGES



LEVEL MEASURING AND ALARM MANAGEMENT CONTROL UNIT with display and operator button. Complete with Host RS232 output and LAN on request.				
Power supply		12÷24 VDC or 110÷230 VAC		
N. of connectable sensors		2 TTL/RS485/0-5V/0-10V		
N. of connectable auxiliary sensors		2 ON/OFF		
Relay outputs		2 NO/NC 24 VDC 0,5 A contacts		
Data connection		RS232/RS485/LAN/GPRS		
Model	Overtoltage protection	Power supply	Battery	Code
Standard	No	12÷24 VDC	No	AT00419/3/1/N
Standard	Yes	100÷230 VAC	No	AT00419/4/2/N
LAN	No	12÷24 VDC	No	AT00419/5/1/N
LAN	Yes	100÷230 VAC	No	AT00419/6/2/N



BARRIER for intrinsically safe level gauge	
N. of sensor inputs	8 (2 for each channel)
Marking	II (1) G [Ex ia Ga] IIC/IIB/IIA T4
Description	Code
Barrier for intrinsically safe level gauge	AT02419/K

### VERSION FOR 8 WATERPROOF DIGITAL MEASUREMENT GAUGES

Control units for monitoring tank levels and alarms. Management of 8 level gauges and 16 smart sensors, 4/8 on/off inputs and 4/8 relays with programmable event outputs. They can be connected to other 4 equipment to extend the amount of measurable levels and alarms and interfaced with the main data management systems on service stations.



TANK FUEL LEVELS AND ALARMS MONITORING CONTROL UNIT for 8 Master Level series waterproof digital gauges.			
Power supply		100-240 VAC 50/60 Hz	
N° of level gauges connectable		8	
N° of level sensors connectable		16 (smart), 4/8 (on/off)	
Marking		II 3 G	
Type	Data output	Alarms*	Code
Basic	RS232/RS485	4 in/4 out	AT11710/A/N/08/04/04
Basic	Radio 169 MHz	4 in/4 out	AT11710/A/W/08/04/04
Basic	Radio 433 MHz	4 in/4 out	AT11710/A/R/08/04/04
Display and keyboard	RS232/RS485	4 in/4 out	AT11710/B/N/08/04/04
Display and keyboard	Radio 169 MHz	4 in/4 out	AT11710/B/W/08/04/04
Display and keyboard	Radio 433 MHz	4 in/4 out	AT11710/B/R/08/04/04
Graphical display	RS232/RS485	4 in/4 out	AT11710/G/N/08/04/04
Graphical display	Radio 169 MHz	4 in/4 out	AT11710/G/W/08/04/04
Graphical display	Radio 433 MHz	4 in/4 out	AT11710/G/R/08/04/04

\* Available also the 8 in/8 out version

## VERSION FOR 16 WATERPROOF DIGITAL MEASUREMENT GAUGES

Control units for monitoring tank levels and alarms. Management of 16 level gauges and 16/32 smart sensors, 4/8 on/off inputs and 4/8/16/32 relays with programmable event outputs, depending on the version. They can be connected to other 4 equipment to extend the amount of measurable levels and alarms and interfaced with the main data management systems on service stations.



TANK FUEL LEVELS AND ALARMS MONITORING CONTROL UNIT for 16 Master Level series waterproof digital gauges.

Power supply	100-240 VAC 50/60 Hz		
N° of connectable level gauges	16		
N° of connectable level sensors	16/32 (smart), 4/8 (on/off)		
Marking	II 3 G		
Type	Data output	Alarms*	Code
Basic	RS232/RS485	4 in/4 out	AT11710/A/N/16/04/04
Basic	Radio 169 MHz	4 in/4 out	AT11710/A/W/16/04/04
Basic	Radio 433 MHz	4 in/4 out	AT11710/A/R/16/04/04
Display and keyboard	RS232/RS485	4 in/4 out	AT11710/B/N/16/04/04
Display and keyboard	Radio 169 MHz	4 in/4 out	AT11710/B/W/16/04/04
Display and keyboard	Radio 433 MHz	4 in/4 out	AT11710/B/R/16/04/04
Graphic al display	RS232/RS485	4 in/4 out	AT11710/G/N/16/04/04
Graphic al display	Radio 169 MHz	4 in/4 out	AT11710/G/W/16/04/04
Graphic al display	Radio 433 MHz	4 in/4 out	AT11710/G/R/16/04/04

\* Available also teh 8 in/8 out, 4 in/16 out, 4 in/32 out version

### Compact Stand-Alone tank monitoring control unit example of application



## **COMPACT, STAND ALONE, MASTER LEVEL SERIES TANK MONITORING CONTROL UNITS FOR INTRINSICALLY SAFE GAUGES**

Control units for monitoring tank levels and alarms. Management of 8/16 level gauges and 16/32 smart sensors, 4/8 on/off inputs and 4/8/16 relays with programmable event outputs, depending on the version. They can be connected to other 4 equipment to extend the amount of measurable levels and alarms and interfaced with the main data management systems on service stations.

### **VERSION FOR 8 MASTER LEVEL EX I MEASUREMENT GAUGES**



CONNECTION INTERFACE for Master Level series intrinsically safe levels measuring gauges and sensors.

Power supply	12 VDC
N° of connectable level gauges	8
N° of connectable sensors	16
Remote data connection	RS232 / BUS RS485
Marking	ATEX II (1) G [Ex ia] IIC T4
Description	Code
8 gauges and 16 sensors connection interface	AT20013

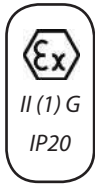


TANK FUEL LEVELS AND ALARMS MONITORING CONTROL UNIT for 8 Master Level series intrinsically safe gauges.

Power supply		100-240 VAC 50/60 Hz	
N° of connectable level gauges		8	
N° of connectable level sensors		16 (smart), 4/8 (on/off)	
Marking		II (1) G [Ex ia] IIC T4	
Type	Data output	Alarms	Code
Basic	RS232/RS485	4 in/4 out	AT19810/A/N/04/04
Basic	Radio 169 MHz	4 in/4 out	AT19810/A/W/04/04
Basic	Radio 433 MHz	4 in/4 out	AT19810/A/R/04/04
Display and keyboard	RS232/RS485	4 in/4 out	AT19810/B/N/04/04
Display and keyboard	Radio 169 MHz	4 in/4 out	AT19810/B/W/04/04
Display and keyboard	Radio 433 MHz	4 in/4 out	AT19810/B/R/04/04
Graphic al display	RS232/RS485	4 in/4 out	AT19810/G/N/04/04
Graphic al display	Radio 169 MHz	4 in/4 out	AT19810/G/W/04/04
Graphic al display	Radio 433 MHz	4 in/4 out	AT19810/G/R/04/04

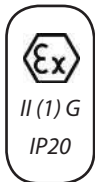


## VERSION FOR 16 MASTER LEVEL EX I MEASUREMENT GAUGES



CONNECTION INTERFACE for Master Level series intrinsically safe levels measuring gauges and sensors.

N° of connectable level gauges	12 VDC
N° of connectable sensors	16
Remote data connection	32
Marking	RS232 / BUS RS485
Marcatura	ATEX II (1) G [Ex ia] IIC T4
Description	Code
16 gauges and 32 sensors connection interface	AT01714

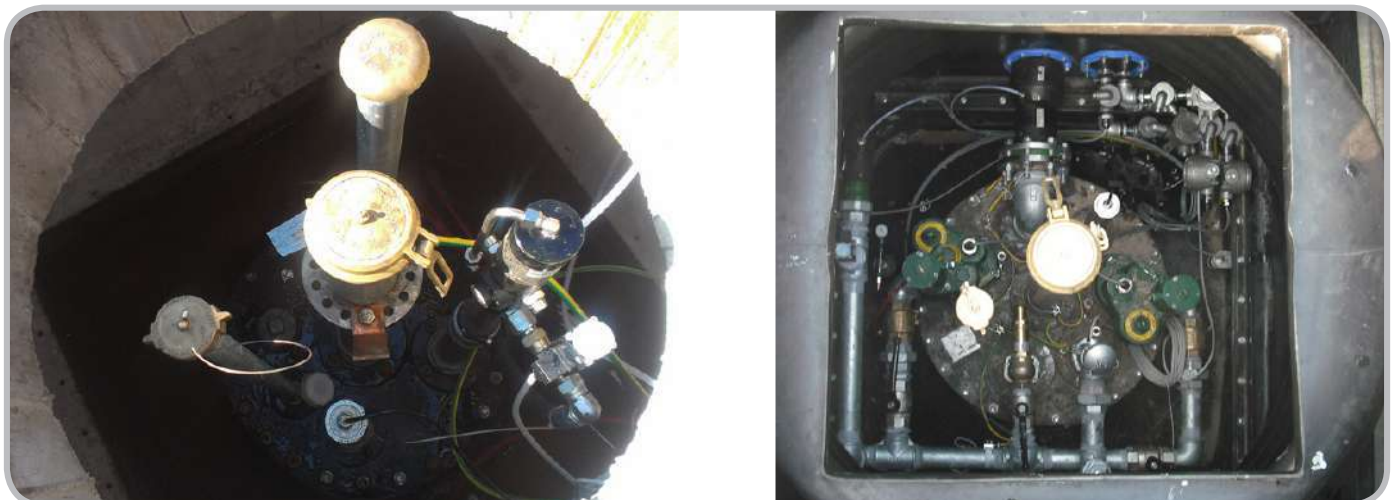


TANK FUEL LEVELS AND ALARM MONITORING CONTROL UNIT for 16 Master Level series intrinsically safe gauges.

Power supply		100-240 VAC 50/60 Hz	
N° of connectable level gauges		16	
N° of connectable level sensors		16/32 (smart), 4/8 (on/off)	
Marking		II (1) G [Ex ia] IIC T4	
Type	Data output	Alarms*	Code
Basic	RS232/RS485	4 in/4 out	AT10210/A/N/04/04
Basic	Radio 169 MHz	4 in/4 out	AT10210/A/W/04/04
Basic	Radio 433 MHz	4 in/4 out	AT10210/A/R/04/04
Display and keyboard	RS232/RS485	4 in/4 out	AT10210/B/N/04/04
Display and keyboard	Radio 169 MHz	4 in/4 out	AT10210/B/W/04/04
Display and keyboard	Radio 433 MHz	4 in/4 out	AT10210/B/R/04/04
Graphic al display	RS232/RS485	4 in/4 out	AT10210/G/N/04/04
Graphic al display	Radio 169 MHz	4 in/4 out	AT10210/G/W/04/04
Graphic al display	Radio 433 MHz	4 in/4 out	AT10210/G/R/04/04

\* Available also teh 8 in/8 out, 4 in/16 out, 4 in/32 out version

### Example of application



## COMPACT, STAND ALONE, MASTER LEVEL TANKS MONITORING CONTROL UNITS FOR EXPLOSION PROOF GAUGES

### VERSION FOR 2 MASTER LEVEL AMT EX D GAUGES



COMPACT CONTROL UNIT for 2 tanks, ATEX version.	
Power supply	12 VCC $\pm$ 5% / Batteria 9 V
N° of connectable level sensors	2 - (AMT: AT08011)
Relay output	2 NA/NC 24 VDC 0,5 A contacts
Remote data connection	RS232 / RS485 / LAN
Protection mode	ATEX Ex d II C
Marking	ATEX Ex II 2G Ex d IIC T4 Gb ATEX Ex II 2D Ex tb IIIC T135°C Db IP66
<i>Description</i>	<i>Code</i>
BUS RS485 local control unit, ATEX version	AT04111/S



### VERSION FOR 16 MASTER LEVEL AMT EX D GAUGES

Control units for monitoring tank levels and alarms. Management of 8/16 level gauges and 16/32 smart sensors, 4/8 on/off inputs and 4/8/16 relays with programmable event outputs, depending on the version. They can be connected to other 4 equipment to extend the amount of measurable levels and alarms and interfaced with the main data management systems on service stations.



TANK LEVELS AND ALARMS MONITORING CONTROL UNIT for 8/16 Master Level series explosion proof gauges.			
Power supply	100-240 VAC 50/60 Hz		
N° of connectable level gauges	8/16		
N° of connectable smart sensors	16/32		
N° of connectable on/off sensors	4/8		
Relay output	4/8		
<i>Type</i>	<i>Data output</i>	<i>Alarms</i>	<i>Code</i>
Basic	RS232/RS485	4 in/4 out	AT06907/A/N/04/04
Basic	RS232/RS485	8 in/8 out	AT06907/A/N/08/08
Display and keyboard	RS232/RS458	4 in/4 out	AT06907/B/N/04/04
Display and keyboard	RS232/RS485	8 in/8 out	AT06907/B/N/08/08

## OPTIONS FOR COMPACT STAND-ALONE CONTROL UNIT



RS232 INTERFACE MODULE for connecting remote devices.

Description	Code
RS232 interface module	AT06406
RS232 interface module for AT00311 control unit	AT06406/M



LAN INTERFACE MODULE for remote programming and management of data.

Description	Code
LAN interface module	AT00407
LAN/RS232 interface module	AT18610



GPRS MODEM for managing data and alarms via GPRS connection (DataHarvest). It also makes it possible to send SMS messages and read information via mobile phone.

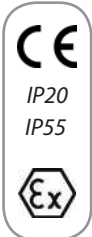
Description	Code
GPRS modem complete of 900-1800 MHz antenna with magnetic base	AT06706



GSM MODEM for managing data and alarms via GSM connection (Software Master Tank).

Description	Code
GSM modem	AT06819/K

## ACCESSORIES FOR COMPACT STAND-ALONE CONTROL UNIT



REMOTE DISPLAY connectable to the monitoring control unit. It displays the volumes, stocks and the missing product in the tanks present on the service station. It is installed outside the office and can be used by tanker conductor for verifying stocks before discharge phases of unmanned service stations.

Version	Code
Standard (IP20)	AT15207
Wireless (IP20)	AT01009
ATEX (Ex d)	AT00711



GRAPHICAL REMOTE DISPLAY connectable to the monitoring control unit. It displays the volumes, stocks and the missing product in the tanks present on the service station.

Data input	Version	Code
RS232	Desktop	AT08414/1/C/T
RS232	Wall mounting	AT08414/1/C/P
RS485	Desktop	AT08414/2/C/T
RS485	Wall mounting	AT08414/2/C/P



EXTERNAL ELECTRO ACOUSTIC SIGNALLING DEVICE. The alarm is turned off only when the alarm reset.

Description	Code
External remote alarm	AT15507



EXTERNAL REMOTE PRINTER used for direct printing of data and remote alarm. Complete of a press print request button that allows you to print the information report of all tanks on the station at any time.

Description	Code
External remote printer	AT15707



EXTERNAL CONTAINER FOR REMOTE ACCESSORIES.

Protection degree	IP55
Dimensions	300X150H300 mm
Description	Code
External container for remote accessories	AT02808



BUS RS485 SERIAL INTERFACE KIT to be used to connect the levels measurement control units to the PC for distances over 15 m.

Description	Code
BUS RS485 serial interface kit	AT02809K



AT02722/K

USB/TTL-RS232-RS485 SERIAL INTERFACE KIT complete of connecting cable. It allows to convert USB signals into a TTL-RS232-RS485 port and vice versa, and then to equip the PC with an TTL-RS232-RS485 serial port for interfacing to the level control units.

Version	Code
USB/TTL	AT02522/K
USB/RS232	AT02622/K
USB/RS485	AT02722/K



PRODUCT DOWNLOADING MANAGEMENT

The system by means of automatic devices blocks the dowloading of the tank wagon if the product discharged does not correspond to the product contained in the tank. The system stores the event log and alarms.



RFID WIRELESS TRANSPONDER READER.			
Frequency	868 MHz		
Reading distance	10 m		
Description			Code
RFID wireless transponder reader			CPT33107/1

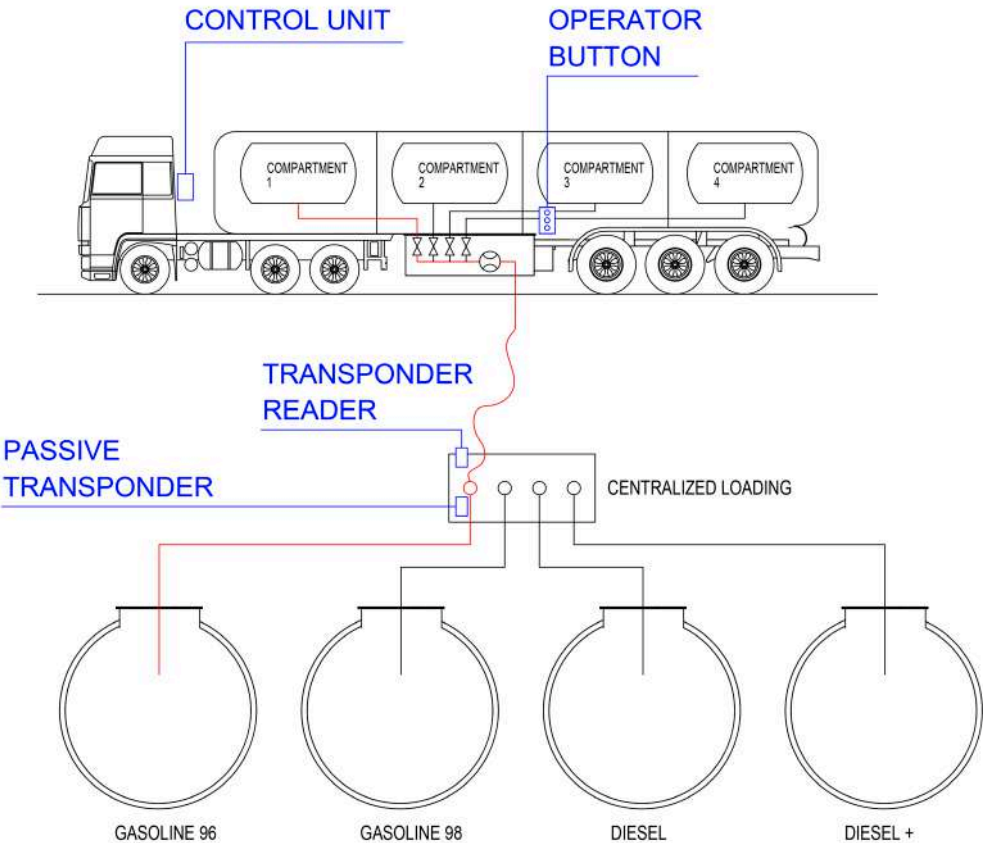


DISC VEHICULAR TRANSPONDER KIT complete with mounting bracket.			
Dimensions	Mounting	Version	Code
Ø 40 mm	With rivets (included)	For trucks, buses	AT09415
Ø 40 mm	Whit clamp (included)	For trucks, buses	AT09515
Ø 30 mm	With rivet (included)	For light vehicles	AT02916



RADIO RECEIVER to communicate with wireless devices.			
Power supply	5÷30 VDC		
Consumption	12÷30 mA		
Radio frequency	868 MHz		
Data output	RS232/RS485		
Description			Code
Radio receiver for wireless reader			AT12212/A/8/N

Product downloading functional diagram



## WATERPROOF LEVEL GAUGES MASTER LEVEL SERIES

### DIGITAL STANDARD AND HIGH RESOLUTION LEVEL GAUGE



WATERPROOF LEVEL GAUGE standard version for fluids/additives (1 float) and high resolution version for diesel. The high resolution version must be used with the AT056410 densimeter.	
Product accuracy	± 0,5 mm (std)   ± 0,25 mm (high res.)
Resolution	0,001 mm
Temperature accuracy	± 1°C
Dipstick sensor material	Aisi 304
Protection degree	IP68
Description	Code
Waterproof standard level gauge	AT05310/X/XXXX
Waterproof high resolution level gauge	AT15610/G/XXXX

### DIGITAL FLEXIBLE LEVEL GAUGE



WATERPROOF FLEXIBLE LEVEL GAUGE for fluids/additives and diesel.	
Product accuracy	± 2 mm
Temperature accuracy	± 2,5°C
Dipstick sensor material	Aisi 316 Ti
Protection degree	IP68
Marking	ATEX II 3 G EX nA IIC T6 Gc
Description	Code
Waterproof flexible level gauge	AT17310/G/XXXX

#### Codes table

	Description	Code
Waterproof level gauge	Waterproof level gauge for additives/fluids (/A) and diesel (/G), standard version	AT05310/A-G/XXXX (*)
	- height 190 cm	XXXX = 0190
	- height 230 cm	XXXX = 0230
	- height 280 cm	XXXX = 0280
	- height 320 cm	XXXX = 0320
	Waterproof level gauge for diesel (/G), high resolution version	AT15610/G/XXXX (*)
	- height 190 cm	XXXX = 0190
	- height 230 cm	XXXX = 0230
	- height 280 cm	XXXX = 0280
	- height 320 cm	XXXX = 0320
	Waterproof level gauge for additives/fluids (/A) and diesel (/G), flexible version	AT17310/A-G/XXXX (*)
	- height 500 cm	XXXX = 500 cm
	- height 1000 cm	XXXX = 1000 cm
	- height 1500 cm	XXXX = 1500 cm
	Other sizes available on request (extra price)	XXXX on request

(\*) XXXX= dipstick height, excluding the gauge head, which must be taken into account to determine the overall dimensions

## ANALOG LEVEL GAUGE

IP68



WATERPROOF ANALOG LEVEL GAUGE for fluids/additives and diesel.	
Power supply	24 VDC $\pm$ 10%
Measure accuracy	$\pm$ 0,1 mm
Repeatability	$\pm$ 0,001 %FS
Output type (X1)	Analog 4-20 mA (X1=1) Analog 20-4 mA (X1=2) Voltage 0-10 V (X1=3) Voltage 10-0 V (X1=4) Voltage 0-5 V ratiometric (X1=5) Voltage 5-0 V ratiometric (X1=6)
Cable-Connector (X2)	Vertical cable (X2=V) Lateral cable (X2=L) Vertical connector (X2=N) Lateral connector (X2=L)
Float	$\varnothing$ 45 mm
Operating temperature	-20°C $\div$ +50°C
Head protection degree	IP67
Material	AISI 304
Description	Code
Waterproof analog level gauge	AT24014/X1/X2/XXX

### Codes table

	Description	Codice
Waterproof analog level gauge	Waterproof analog level gauge	CPT24014/X1/X2/XXX (*)
	- height 60 cm	XXX = 060 cm
	- height 100 cm	XXX = 100 cm
	- height 150 cm	XXX = 150 cm
	- height 175 cm	XXX = 175 cm
	- height 200 cm	XXX = 200 cm
	Other sizes available on request	XXX on request

(\*) XXX= dispstick height, excluding the gauge head, which must be taken into account to determine the overall dimensions

## INTRINSICALLY SAFE LEVEL GAUGES MASTER LEVEL SERIES

### STANDARD, HIGH RESOLUTION LEVEL GAUGE AND FLEXIBLE



INTRINSICALLY SAFE LEVEL GAUGE standard version for fuels. The high resolution version must be used with the AT056410 densimeter.

Product accuracy	± 0,5 mm (std)   ± 0,25 mm (high res.)
Resolution	0,001 mm
Temperature accuracy	± 1°C
Dipstick sensor material	Aisi 1.4301/304
Marking	ATEX II 1/2G Ex ia IIC T6
Description	Code
Intrinsically safe standard level gauge	AT11610/C/XXXX
Intrinsically safe high resolution level gauge	AT05410/C/XXXX



INTRINSICALLY SAFE FLEXIBLE LEVEL GAUGE for fuels.

Product accuracy	± 2 mm
Temperature accuracy	± 2,5°C
Dipstick sensor material	Aisi 1.4301/304
Marking	ATEX II 1/2G Ex ia IIC T6
Description	Code
Intrinsically safe flexible level gauge	AT05510/C/XXXX



DENSITY SENSOR Allows accurate and continuous measurement of density.

Measure accuracy	± 2 g/l
Resolution	0,1 g/l
Material	Aisi 304/316 Ti
Description	Code
Density sensor	AT05610

#### Codes table

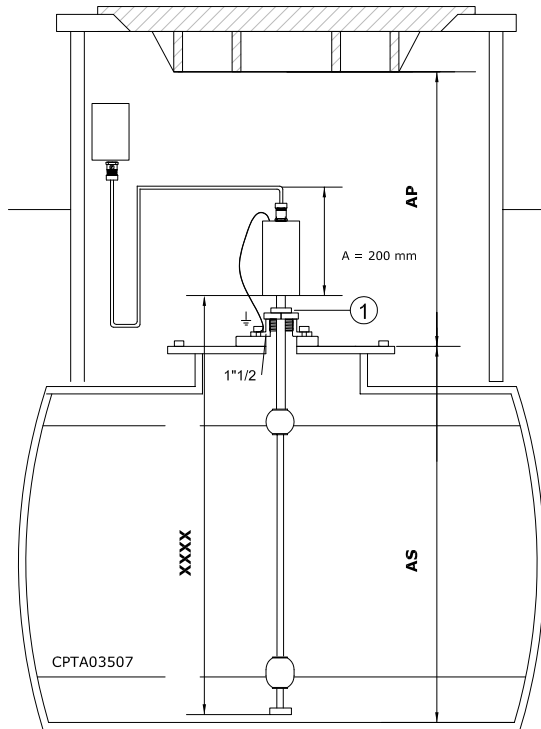
	Description	Code
Intrinsically safe level gauge	Intrinsically safe level gauge for fuels, standard version	AT11610/C/XXXX (*)
	- height 190 cm	XXXX = 0190
	- height 230 cm	XXXX = 0230
	- height 280 cm	XXXX = 0280
	- height 320 cm	XXXX = 0320
	Intrinsically safe level gauge for fuels, high resolution version	AT05410/C/XXXX (*)
	- height 190 cm	XXXX = 0190
	- height 230 cm	XXXX = 0230
	- height 280 cm	XXXX = 0280
	- height 320 cm	XXXX = 0320
	Intrinsically safe level gauge for fuels, flexible version	AT05510/C/XXXX (*)
	- height 500 cm	XXXX = 500 cm
	- height 1000 cm	XXXX = 1000 cm
	- height 1500 cm	XXXX = 1500 cm
	Other sizes available on request (extra price)	XXXX on request

(\*) XXXX= dipstick height, excluding the gauge head, which must be taken into account to determine the overall dimensions

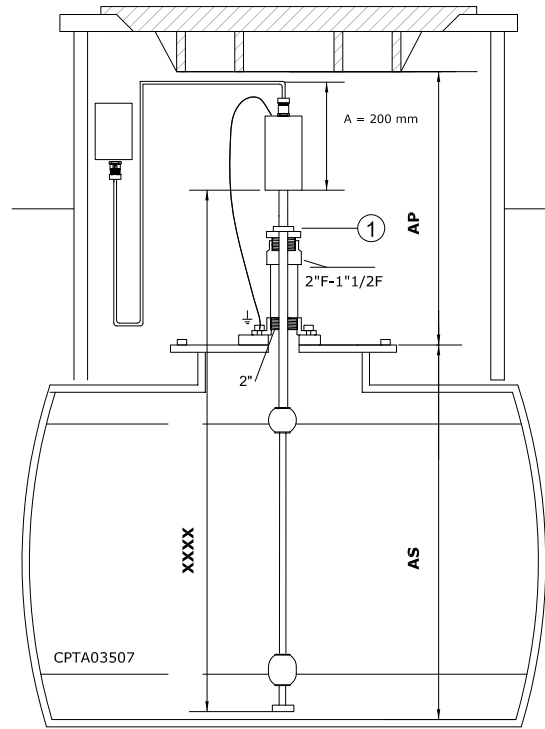


**Level measuring gauge mounting and height determination diagram**

**EXTERNAL MOUNTING (obligatory for flexible probes)**

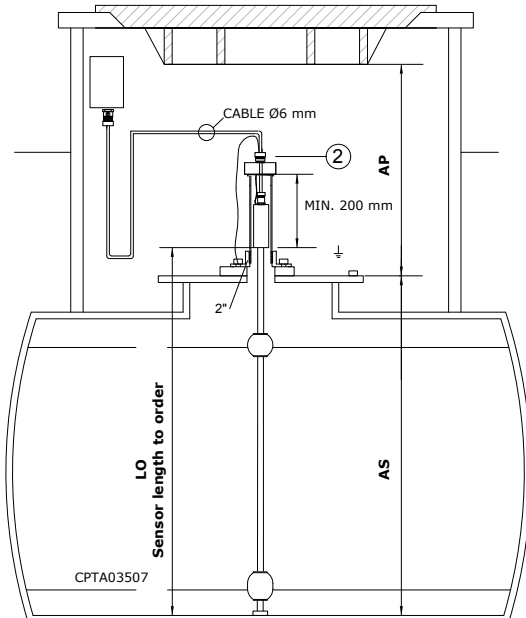


1A. BRASS EXTERNAL MOUNT ADAPTOR CODE AT05810  
1B. STAINLESS STEEL EXTERNAL MOUNT ADAPTOR CODE AT14110



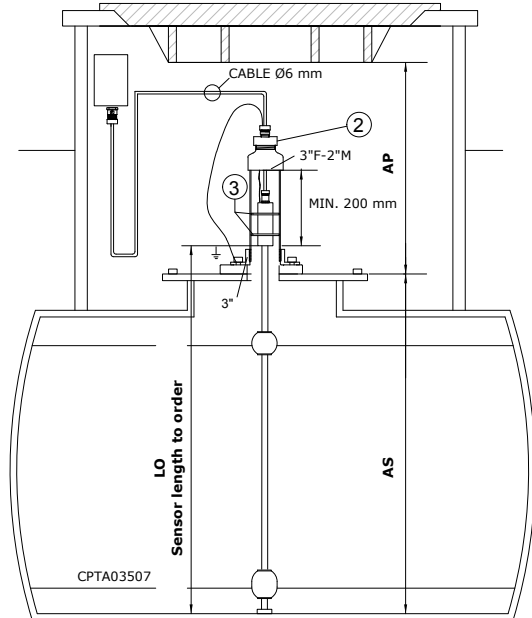
1A. BRASS EXTERNAL MOUNT ADAPTOR CODE AT05810  
1B. STAINLESS STEEL EXTERNAL MOUNT ADAPTOR CODE AT14110

**INTERNAL MOUNTING (RISER)  
WITH PIPE SIZE 2"**  
(Not possible with aggressive liquids)



2A. INTERNAL MOUNT ADAPTOR + 1 HOLE IP68 GLAND CODE AT11910/1  
2B. INTERNAL MOUNT ADAPTOR + 2 HOLES ATEX GLANDS CODE AT11910/2

**INTERNAL MOUNTING (RISER)  
WITH PIPE SIZE 3" / 4"**



2A. INTERNAL MOUNT ADAPTOR + 1 HOLE IP68 GLAND CODE AT11910/1  
2B. INTERNAL MOUNT ADAPTOR + 2 HOLES ATEX GLANDS CODE AT11910/2  
3. SPACER FOR INTERNAL MOUNT FOR PIPES SIZE 3" OR 4" CODE AT05710

AP = manhole height AS = tank height

XXXX = height dispstick, excluding the gauge head, which must be taken into account to determine the overall dimensions

## WIRELESS INTRINSICALLY SAFE LEVEL GAUGES SMART SERIES



WIRELESS INTRINSICALLY SAFE LEVEL GAUGES for fuels complete with battery.		
Serial data transmission	Wireless	
Measure accuracy	± 0,5 mm	
Housing material	Aluminum	
Dipstick material	Inox 304	
Floats	N° 2 stainless steel Ø 45 mm	
Gauges length*	Fino a 7 m (passo 25 cm)	
Protection	IP68	
Marking	ATEX II 1/1G Ex ia/h IIB T6 Ga/Ga FISCO FIELD DEVICE	
Product	Length	Code
Fuels	Max 4 m	AT08919/IS/F/3/XXXX*
Fuels	Da 4 a 5 m	AT08919/IS/F/3/XXXX*
Fuels	Da 5 a 7 m	AT08919/IS/F/3/XXXX*

*Note: the wireless data gauge can also be used with additives*

### FLEXIBLE VERSION



Product	Length	Code
Fuels	Max 6 m	AT08919/IF/F/3/XXXX*
Fuels	Max 7 m	AT08919/IF/F/3/XXXX*
Fuels	Max 10 m	AT08919/IF/F/3/XXXX*

### Example of installation



**ACCESSORIES FOR WIRELESS INTRINSICALLY SAFE LEVEL GAUGE SMART SERIES**

RISER COVER for wireless level probe antenna.		
Material	antistatic PA	
Connection	2" F	
Hight	18 cm	
<i>Description</i>		<i>Code</i>
Riser cover		AT13717



RF RECEIVER.		
Frequency	169.4-169.182 MHz	
N. of channels	41	
Sensitivity	-115 dBm	
Data connection	RS485	
Protection	IP68	
<i>Description</i>		<i>Code</i>
RF receiver		AT13819



169 MHz ANTENNA.		
V.S.W.R (169 MHz)	< 2:1	
Gain @ (169 MHz)	5 dBi	
Cable length	1 m	
<i>Description</i>		<i>Code</i>
169 MHz antenna		AT13619



RF RECEIVER CONNECTION CABLE.		
<i>Length</i>	<i>Connection</i>	<i>Code</i>
5 m	SM12 4PF	AT07712/5

## ACCESSORIES FOR INTRINSICALLY SAFE AND WATERPROOF LEVEL GAUGE

### MASTER LEVEL SERIES



ADAPTER FOR EXTERNAL MOUNTING. Available in brass for fuel and stainless steel for aggressive liquids.

Connection	Material	Code
M 1" 1/2	Brass	AT05810
M 2"	Brass	AT08511
M 1" 1/2	Stainless steel	AT14110



ADAPTER complete with gland, for mounting inside of pipes size 2".

Material	Chromed brass	
Connection	Protection	Code
F 2" 1 foro Ø 6	IP68	AT11910/1
F 2" 2 fori Ø 6	ATEX	AT11910/2



ADAPTER for mounting gauge on the barrels.

Connection	Material	Code
F 1" 1/2	Aisi 316	AT09518



CENTERING ADAPTER for mounting inside of pipes size 3" and 4".

Description	Code
Centering adapter	AT05710



INSTALLATION KIT GAUGES IN A LPG TANK. The Kit consists of a jacketed pipe with a special external float and a 3/4" NPT separation joint.

Max length	3300 mm (other sizes on request)	
Description	Code	
Installation kit gauges in a LPG tank	AT06110	



1" INSTALLATION KIT. The kit includes a float for the product, one for water and a 1" screw fixing adapter.

Connection	Material	Code
1"	Brass	AT06210



GRAY SHIELDED 4X0,5 MM WATERPROOF LEVEL GAUGE CONNECTION CABLE.

Description	Code
Waterproof level gauge connection cable (pack 100 m)	AT10411



SURGE PROTECTION. It protects equipment from direct and indirect atmospheric discharge.

Description	Code
Surge protection	AT29402



MUFFLE KIT for joint waterproof level gauges, including 5 fast connection terminals.

Description	Code
Muffle kit for waterproof level gauges	AT17210





BLUE SHIELDED 4X0,5 MM INTRINSICALLY SAFE LEVEL GAUGE CONNECTION CABLE.

Description	Code
Standard (pack 100 m)	AT17604
Double insulation (pack 100 m)	AT18411



MUFFLE KIT for joint intrinsically safe level gauges, including 5 fast connection terminals.

Description	Code
Muffle kit for intrinsically safe level gauge	AT02301



DISCHARGER for flexible level gauges and for those installed at a distance of more than 25 m from the control unit.

Description	Code
Disharger for level gauges	AT01015

## MINIATURIZED LEVEL GAUGE



MINIATURIZED LEVEL GAUGE for tank vehicles.

Power supply (X1)	5/12 VDC
Non-linearity	± 0,15 mm
Repeatability	± 25 µm
Output (X2)	1=Analog 0,1-4,9 V a 12 VDC 2=Ratiometric 2%÷98% di VDC
Available height (XXX*)	10/15/20/25 cm
Overfilling contact (X3)	0= No
Calm pipe (X4)	-=No; T= Yes
Cable length (X5)	Meters
Material	Dipstick: Aisi 304; Float: BUNA
Operating temperature	-20°C ÷ +55°C
Protection degree	IP67
Marking	ATEX II 1G ma IIB T4 Ga, II 2G mb IIB T4 Gb
Description	Code
Miniaturized level gauge	CPT13710/X1/X2/XXX*/X3/X4/X5



INTRINSIC SAFETY BARRIER for use in zone 0.

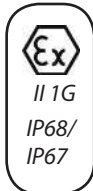
Marking	ATEX II (2) G [Ex ib Gb] IIB/IIA
Description	Code
Ex i barrier for connection 2 gauges	CPT25014/4/A
Ex i barrier for connection 4 gauges	CPT25014/8/A

## EX ma ENCAPSULATED SENSORS



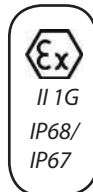
### FLOAT LEVEL SWITCH for tanks.

Max switching voltage	28,8 VDC
Max switching current	0,5 A
Diameter	45 mm
Connection	1/4"
Cable	Shielded PVC, std length 5 m
Output function	Switch
Protection degree	IP68 (Cable output IP67)
Marking	ATEX II 1G Ex ma IIC T6 Ga (Zona 0)
Description	Code
Float level switch	CPTL07/S/3/1/00/008/05



### LIQUID PRESENCE FLOAT SENSOR FOR TANK AND WELL INTERSTICE.

Dimensions	Ø 50 mm length 80 mm	
Interstice pipe	2"	
Cable	Shielded PVC, std length 5 m	
Protection degree	IP68 (Cable output IP67)	
Marking	ATEX II 1G Ex ma IIC T6 Ga	
Product	Output	Code
Water/gasoline/diesel	On/off	CPTL07/S/3/A/00/008/05
Water/gasoline/diesel	Smart	CPTL07/Z/3/A/00/008/05
Discriminantating	On/off	CPTL07/B/3/A/15/008/05
Discriminantating	Smart	CPTL07/Z/3/A/15/008/05



### LIQUID PRESENCE FLOAT SENSOR FOR DISPENSER WELL.

Dimensions	Ø 60 mm length 500 mm	
Cable	Shielded PVC, std length 5 m	
Protection degree	IP68 (Cable output IP67)	
Marking	ATEX II 1G Ex ma IIC T6 Ga	
<i>Product</i>	<i>Output</i>	<i>Code</i>
Water/gasoline/diesel	On/off	CPTL07/S/3/B/00/050/05
Water/gasoline/diesel	Smart	CPTL07/Z/3/B/00/050/05
Discriminating	On/off	CPTL07/B/3/C/15/050/05
Discriminating	Smart	CPTL07/Z/3/C/15/050/05



### LIQUID PRESENCE FLOAT SENSOR FOR TANK WELL.

Dimensions	Ø 60 mm length 500 mm	
Cable	Shielded PVC, std length 5 m	
Protection degree	IP68 (Cable output IP67)	
Marking	ATEX II 1G Ex ma IIC T6 Ga	
<i>Product</i>	<i>Output</i>	<i>Code</i>
Water/gasoline/diesel	On/off	CPTL07/S/3/D/00/050/05
Water/gasoline/diesel	Smart	CPTL07/Z/3/D/00/050/05
Discriminantng	On/off	CPTL07/B/3/E/15/050/05
Discriminantng	Smart	CPTL07/Z/3/E/15/050/05



MINIATURIZED MINIMUM FLOAT LEVEL SWITCH.			
Max switching voltage		28,8 VDC	
Max switching current		0,5 A	
Cable		Shielded PVC, std length 3 m	
Output function		Switch/Commutation	
Protection degree		IP68 (Cable output IP67)	
Marking		ATEX II 1G Ex ma IIC T6 Ga	
Connection	Cable length	Version	Code
1/8 M	3 m	Standard	CPTL07/P/15/3/00/004/03
1/8 M	3 m	Discriminating	CPTL07/P/15/9/00/004/03
1 M - 3/8 F	3 m	Standard	CPTL07/P/8/3/00/004/03
1 M - 3/8 F	3 m	Discriminating	CPTL07/P/8/9/00/004/03
1/8 M	3 m	With mechanical protection	AT18413/03
1/8 M	15 m	With mechanical protection	AT18413/15



MANHOLE COVERS OPENING ALARM for underground tanks, complete of fixing kit.	
Max switching voltage	28,8 VDC
Max switching current	0,5 A
Cable	Shielded PVC, std length 5 m
Output function	Switch/Commutation
Protection degree	IP68 (Cable output IP67)
Marking	ATEX II 1G Ex ma IIC T6 Ga
Description	Code
Manhole covers opening alarm	AT08010



VOLUMETRIC SENSOR (reflected wave) FOR THE DETECTION OF THE MANHOLE COVERS OPENINGS for underground tanks. Complete with accessories necessary for installation inside the underground wells.	
Switching voltage	12 VDC
Max switching current	0,5 A
Cable	PVC shielded, standard length 5 m
Output function	Switch
Protection degree	IP68 (Cable output IP67)
Marking	ATEX II 2G Ex ma IIC T6 Ga
Output	Code
On/Off	AT04213/A/05
RS485	AT04213/B/05
4÷20 mA	AT04213/C/05

## GRAVITY LEAK SENSOR



GRAVITY LEAK SENSOR to detect pipe leakage, to be installed in the lower part of the well.

Max switching voltage	28,8 VDC
Max switching current	0,5 A
Cable	Shielded PVC, std length 3 m
Output function	Simple (NA/NC)
Protection degree	IP68
Marking	ATEX II 1G Ex ma IIC T6 Ga
Version	Code
1 piping	AT38902/1/M
6 piping	AT38902/6/M



EXPANSION MANIFOLD of the gravity sensor for additional 3 monitoring hoses.

Description	Code
Expansion manifold	AT21411/3



FLAME TRAP to install on the vent hose of a gravity sensor (if used).

Marking	ATEX II 2G Ex d IIC Gb
Description	Code
Flame trap	AT21511



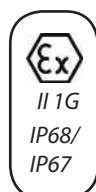
FUEL SUCTION VALVE BLOCK, to be installed on the intake of the interspace of the tank in the case of control by means of vacuum leaks.

Description	Code
Fuel suction valve block	AT02311



PROTECTION CIRCUIT FOR Ex m DEVICES, to be used with the level switches, with the purpose of limiting the voltage and current within the specified limits.

Use	Zone 0 and 1
Description	Code
Protection circuit for Ex m devices	AT17511/A

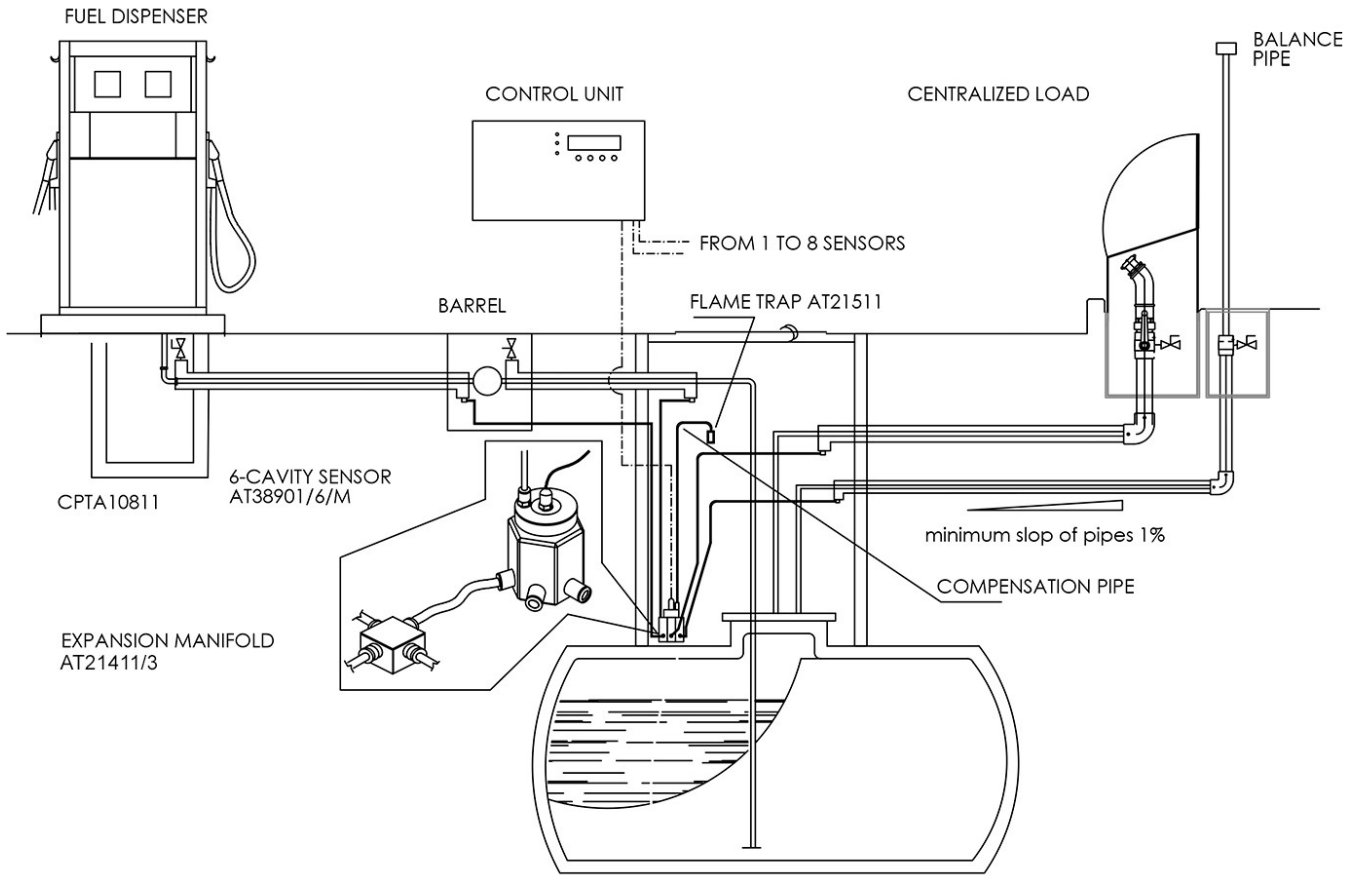


KIT FOR THE DETECTION OF THE MINIMUM PRODUCT LEVEL IN TANKS. Consisting of, in the single version of 1 CPTL07/S switch, and a AT17511/A protection circuit and, in the double version, 2 CPTL07/S switches and 2 AT17511/A protection circuits.

Version	Code
Single	AT13912/S
Double	AT13912/D



**Gravity leak sensor functional diagram**



[illegible]

# MECHANICAL CLOCK LEVEL GAUGE MEASUREMENT



**MECHANICAL CLOCK**



AT21016 - reading 0-3 m



AT21016 - reading 0-5 m

MECHANICAL CLOCK designed to detect the level measurement in small, medium and large tanks. Based on the principle of the hydrostatic thrust, a clock mechanic is activated which locally indication of the level on a single-scale or double-scale circular quadrant without power supply.

Quadrant	Ø 130 mm, single-scale 0-3m resolution 10 mm (/03) Ø 130 mm, double-scale 0-5m resolution 2,5 mm (/05)
Accuracy	± 2,5 mm throughout the field
Repeatability	± 1 mm
Head case	Anodised aluminum, painted with epoxy resin, IP65 protection
Fixing neck	Nickel plated brass L = 70 mm
Connection	Flanged DN65 PN40 or DN80 PN40 in A105 (depending on model)
Guide dipstick	AISI 304L Length LTOT (see diagram)
Float	Ø 56mm in PVC foam
Product	LPG
Product specific weight	0,55Kg/dm <sup>3</sup>
Analog outputs	4-20mA certificate EEx-ia IIC T6 – power supply 12-30Vdc
Digital outputs	1/2 mechanical microswitches
Versions	No contact / 1 contact / 2 contacts / Smart
Max pressure	40 bar
Operating temperature	-20 C° / +60 C°
Marking	ATEX II 2 G D c IIC IP65 T6 (mechanical, stainless steel version) ATEX II 2G Ex mb II B T6 (smart version)

*Codice*

AT21016/READING/CONNECTION/OUTPUTS/LTOT/L1/L2

***Mechanical clock version***

*1/2 CONTACTS version*

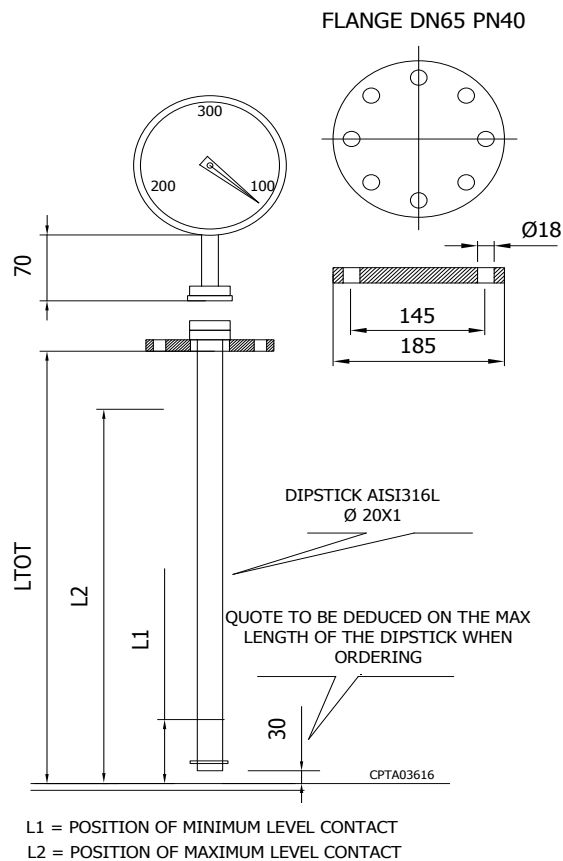
*SMART version*





/Reading	/Connection	/Outputs	/LTOT	/L1	/L2	Code
0-3 m	DN65 PN40	No contact	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/03/1/0/XXX/XXX/XXX
0-3 m	DN80 PN40	No contact	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/03/2/0/XXX/XXX/XXX
0-5 m	DN65 PN40	No contact	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/05/1/0/XXX/XXX/XXX
0-5 m	DN80 PN40	No contact	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/05/2/0/XXX/XXX/XXX
0-3 m	DN65 PN40	1 contact (L1)	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/03/1/1/XXX/XXX/XXX
0-3 m	DN80 PN40	1 contact (L1)	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/03/2/1/XXX/XXX/XXX
0-5 m	DN65 PN40	1 contact (L1)	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/05/1/1/XXX/XXX/XXX
0-5 m	DN80 PN40	1 contact (L1)	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/05/2/1/XXX/XXX/XXX
0-3 m	DN65 PN40	2 contacts (L1, L2)	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/03/1/2/XXX/XXX/XXX
0-3 m	DN80 PN40	2 contacts (L1, L2)	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/03/2/2/XXX/XXX/XXX
0-5 m	DN65 PN40	2 contacts (L1, L2)	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/05/1/2/XXX/XXX/XXX
0-5 m	DN80 PN40	2 contacts (L1, L2)	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/05/2/2/XXX/XXX/XXX
0-3 m	DN65 PN40	Smart	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/03/1/3/XXX/XXX/XXX
0-3 m	DN80 PN40	Smart	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/03/2/3/XXX/XXX/XXX
0-5 m	DN65 PN40	Smart	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/05/1/3/XXX/XXX/XXX
0-5 m	DN80 PN40	Smart	XXX (cm)	XXX (cm)	XXX (cm)	AT21016/05/2/3/XXX/XXX/XXX

**Mechanical clock height determination diagram**



## Options for clock meters



1/2 CONTACTS.	
Max power supply	24 Vdc
Max current	0,5 A
Description	Code
1 contact	AT02617/1
2 contacts	AT02617/2

Note: if used in an area with an explosion hazard, you must install the zener barrier



MAGNETIC COUPLING ABSOLUTE POSITION TRANSMITTER with 360° reading and typical resolution of 0,35° equivalent to 1024 positions for the entire lap.

Power supply	12÷24 VDC ± 5%
Consumption	40 mA + (2Iload + 20 mA)
Full-scale 3 mm accuracy	± 3 mm
Full-scale 5 mm accuracy	± 5 mm
ON/OFF 1 output	0 - 24 VCC Iload=50 mA max
ON/OFF 2 output	0 - 24 VCC Iload=50 mA max
Data output	RS485
Protocol	Modbus / SMT
Current output	Standard 4-20 mA
Type cable	Shielded PVC, L standard 3 m, Ø 5,9 mm <sup>2</sup>
Operating temperature	-25°C ÷ +60°C
Storage temperature	-40°C ÷ +70°C
Body material	Aluminium
Dimensions	Ø 70X22 mm
Marking	ATEX II 2G Ex mb II B T6
Description	Code
Absolute position transmitter	CPT06009/1/03

Note: The transducer's external power source must be equipped with a current limiting device (eg. AT17511/A) with a max current of 50 mA, a maximum voltage of 250 V and a breaking capacity of 1500 A (EN60127)

## Accessories for clock meters



DIN RAIL 35 4 MM TERMINAL complete with fuse.	
Fuse	100 mA
Description	Code
DIN 35 4 mm terminal complete with fuse	AT06617



Ex i PASSIVE BARRIER..	
Inputs	4
Marking	ATEX II (2) G [Ex ib Gb] IIB/IIA
Description	Code
Ex i passive barrier	CPT25014/4/A



MODBUS/VEEDER ROOT PROTOCOL CONVERTER.

Input signal	RS485
Output signal	RS232
Description	Code
Modbus/Veeder Root protocol converter	AT01217



REMOTE DISPLAY CONTROL UNIT. Displays volumes, inventories and missing of up to 6 level measurement gauges.

Data input	Device	Version	Code
RS232	Stand Alone	Wall mounting	AT08414/1/S/P
RS485	Stand Alone	Wall mounting	AT08414/2/S/P



CONFIGURATION SOFTWARE FOR TRANSMITTER. Allows management of the following parameters: communication protocol, address (1 ÷ 255), activation level in% of outputs 1 and 2. It also allows calibration of 4-20 mA output.

Description	Code
Configuration software for transmitter	CPTS01210



REAL-TIME VISUALIZATION SOFTWARE of LPG level transducer.

Description	Code
Level visualization software	CPTS00313



BUS RS485 SERIAL INTERFACE KIT to be used to connect the levels measurement control units to the PC for distances over 15 m.

Description	Code
BUS RS485 serial interface kit	AT02809K



USB/RS485 SERIAL INTERFACE KIT with connection cable.

Description	Code
USB/RS485	AT02722/K

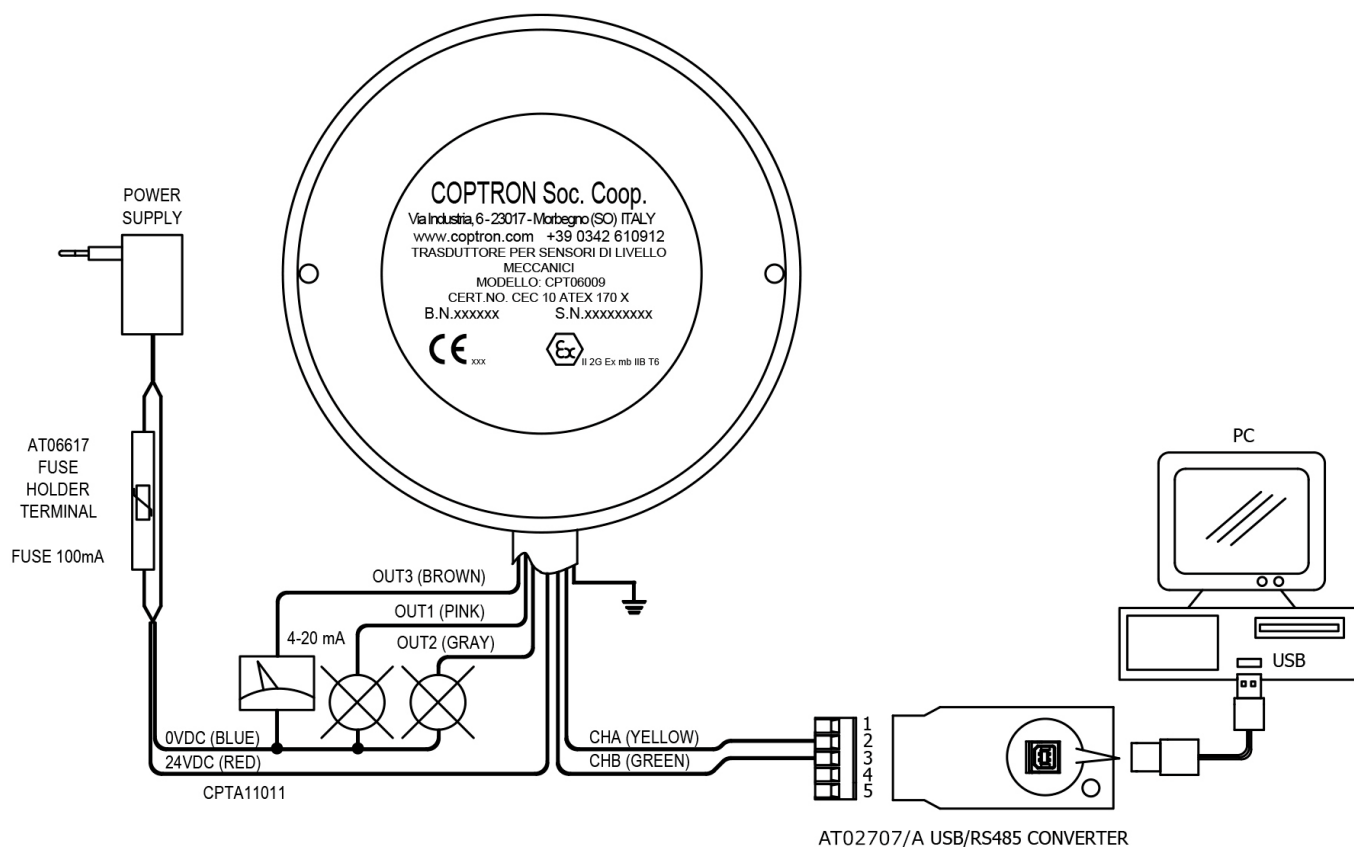
Monitoring control unit



TANK LEVELS AND ALARMS CONTROL UNIT.

Power supply	100-240 VAC 50/60 Hz		
Consumption	25 W		
N. of connectable transducer	8		
N. of connectable on/off sensors	4/8		
Relay output	4/8		
Relay output capacity	500 mA 24 VCC		
Type	Data output	Alarms	Code
Basic	RS232/RS485	4 in/4 out	AT06907/A/N/04/04
Basic	RS232/RS485	8 in/8 out	AT06907/A/N/08/08
Display and keyboard	RS232/RS485	4 in/4 out	AT06907/B/N/04/04
Display and keyboard	RS232/RS485	8 in/8 out	AT06907/B/N/08/08

**CPT06009 position transmitter functional diagram**





# TELEMETRY SYSTEM



## RMT16 SERIES REMOTE TERMINAL



No display version



Display version

RMT16 SERIES REMOTE TERMINAL for remote reading of various types of sensors. This incorporates both a solar panel that a pack of batteries and does not require external power. The sensors are powered only when reading; two slots allow you to connect the device to a data concentrator using the GSM, GPRS, WiFi, RF etc. You can also have a display that allows you to locally view the data collected by the device.

Expansions (X1, X2)

A= RS232; D: RS485; B=GSM/GPRS; C=LAN;  
R=radio 868 MHz; F=radio 169 MHz; S=SD 2 G  
module, N=absent

Display	Expansion 1	Expansion 2	Sensor	Solar panel	Code
Absent	X1	X2	Absent	Absent	RMT16/A/X1/X2/A/A
Absent	X1	X2	Absent	Present	RMT16/A/X1/X2/A/P
Absent	X1	X2	Hydrostatic level	Absent	RMT16/A/X1/X2/L/A
Absent	X1	X2	Hydrostatic level	Present	RMT16/A/X1/X2/L/P
Absent	X1	X2	Hydrostatic level and pressure	Absent	RMT16/A/X1/X2/P/A
Absent	X1	X2	Hydrostatic level and pressure	Present	RMT16/A/X1/X2/P/P
Present	X1	X2	Absent	Absent	RMT16/P/X1/X2/A/A
Present	X1	X2	Absent	Present	RMT16/P/X1/X2/A/P
Present	X1	X2	Hydrostatic level	Absent	RMT16/P/X1/X2/L/A
Present	X1	X2	Hydrostatic level	Present	RMT16/P/X1/X2/L/P
Present	X1	X2	Hydrostatic level and pressure	Absent	RMT16/P/X1/X2/P/A
Present	X1	X2	Hydrostatic level and pressure	Present	RMT16/P/X1/X2/P/P

### Expansions(X1, X2)



RS232 INTERFACE MODULE for connecting remote devices.

Description	Code
RS232 interface module	AT06406



RS485 INTERFACE MODULE for connecting remote devices.

Description	Code
RS485 interface module	AT06606



LAN INTERFACE MODULE for remote data programming and management using the LAN available on the system.

Description	Code
LAN interface module	AT00407



GSM/GPRS MODEM for managing data and alarms via GSM connection. Complete of 900-1800 MHz antenna with magnetic base

Description	Code
GSM/GPRS modem complete of 900-1800 MHz antenna with magnetic base	AT06706



MEMORY EXPANSION MODULE complete of socket for 2 GB SD card used to save a copy of the data file.

Description	Code
SD 2 GB expansion module	AT15816



WIRELESS RADIO MODULE for sending and receiving radio data. Use with the stylus antenna.

Description	Code
868 MHz radio module	AT46506
169 MHz radio module	AT22116
Stylus antenna for AT46506 module	AT14012
Stylus antenna for AT22116 module	AT22216

### Accessories for RMT16 remote terminal



ANALOG WATERPROOF LEVEL GAUGE for the measurement of the product.	
Measure accuracy	± 0,5 mm
Output signal	0,5 ÷ 4,5 VCC (ratiometric)
Cable-Connector (X2)	Vertical connector
Operating temperature	-20°C ÷ +50°C
Marking	ATEX II 3 G Ex ic IIC Gc
Length	Code
60 cm	CPT24014/5/N/060
100 cm	CPT24014/5/N/100
150 cm	CPT24014/5/N/150
175 cm	CPT24014/5/N/175
200 cm	CPT24014/5/N/200



DIGITAL WATERPROOF LEVEL GAUGE for measuring the tank product, water and temperature.		
Measure accuracy	± 0,5 mm (std)   ± 0,25 mm (high res.)	
Marking	ATEX II 3 G Ex nA IIC T6 Gc	
Version	Length	Code
Standard	190 cm	AT05310/G/0190
High resolution	190 cm	AT15610/G/0190



DENSITY SENSOR for high resolution AT15610 measuring gauges. Allows accurate and continuous measurement of density.

Measure accuracy	$\pm 2 \text{ g/l}$
Resolution	$0,1 \text{ g/l}$
Sensor material	Aisi 304/316 Ti
Description	Code
Density sensor	AT05610



OPTICAL LEVEL SENSOR for measuring the height of the volume of solids.

Output signal	0,5 ÷ 4,5 VCC (ratiometric)	
Data output	RS485 MODBUS	
Measure range	4 ÷ 30 cm, 10 ÷ 80 cm, 20 ÷ 150 cm, 100 ÷ 550 cm	
Output (*)	X1 = A0: analog, AL: linearized analog, D1: serial add. 1, D2: serial add. 2, D3: serial add. 3, D4: serial add. 4	
Cable length	2 m (standard)	
Marking	ATEX II 3D Ex tc IIIA T70°C Dc IP54	
Measure range	Output (*)	Code
4 ÷ 30 cm	X1	CPT14516/1/X1/02
10 ÷ 80 cm	X1	CPT14516/2/X1/02
20 ÷ 150 cm	X1	CPT14516/3/X1/02
100 ÷ 550 cm	X1	CPTT14516/4/X1/02



CONCENTRATOR to use when multiple devices are present in a limited area. It allows only one GSM module to communicate with the central server and use a radio module to connect up to 16 remote devices with their radio module.

Description	Code
Concentrator	AT00917



ADDITIONAL SOLAR PANEL for concentrator, to be used when it is not possible to connect to the power supply.

Description	Code
Solar panel for concentrator	AT01017

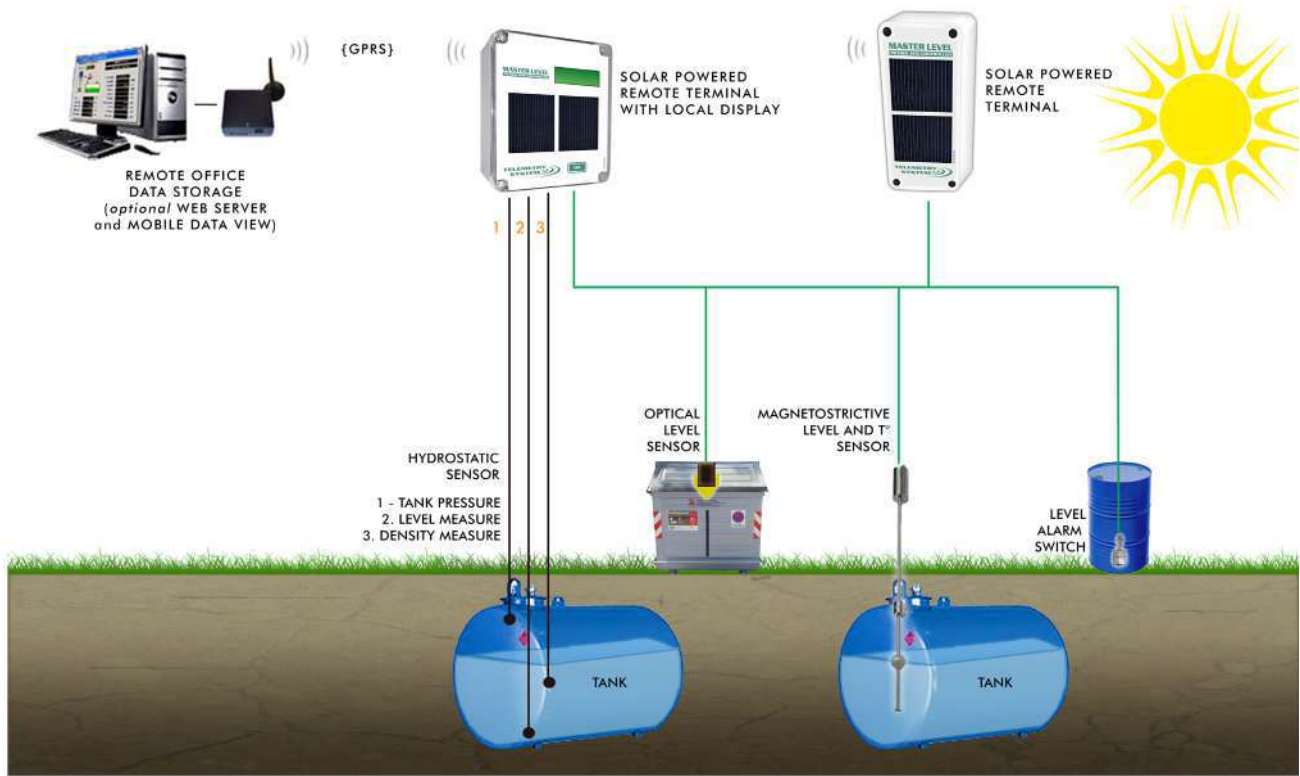


REPEATER to increase radio communication coverage between remote devices and concentrators. It must be used with the AT22416 antenna.

Power supply	$7,5 \div 24 \text{ VCC}$
Radio frequency	169 MHz
Output	500 mW (27 dBm)
Description	Code
169 MHz repeater	AT22316
Antenna for repeater	AT22416



**RMT16 remote system functional diagram**





# MANAGEMENT AND CONTROL SYSTEMS FOR WASTEWATER DISCHARGE



## LIQUID DETECTION MANAGEMENT SYSTEMS ON/OFF SENSORS VERSION



LIQUID DETECTION MANAGEMENT SYSTEM available with 1 CPTL07/P/15/9/00/004/05 float and in multifunction version for 2RP Control with 1 CPTL07/P/15/9/00/004/05 float + 1 CPTL07/P/15/3/00/004/05 float or with 1 CPTL07/P/15/3/00/004/05 float. Complete with AT17511/A protection circuit.

Version	Code
1 float (CPTL07/P/15/9)	AT17201/A
2 floats (CPTL07/P/15/9 + CPTL07/P/15/3)	AT17201/B
1 float (CPTL07/P/15/3)	AT17201/C

### Accessories for liquid detection management system on/off version



MINIATURIZED MINIMUM FLOAT LEVEL SWITCH.

Max switching voltage		28,8 VCC
Max switching current		0,5 A
Cable		Shielded PVC, std length 3 m
Output function		Switch/ Commutation
Protection degree		IP68 (cable output IP67)
Marking		ATEX II 1G Ex ma IIC T6 Ga
Connection	Version	Code
1/8 M	Standard	CPTL07/P/15/3/00/004/03
1/8 M	Discriminating	CPTL07/P/15/9/00/004/03



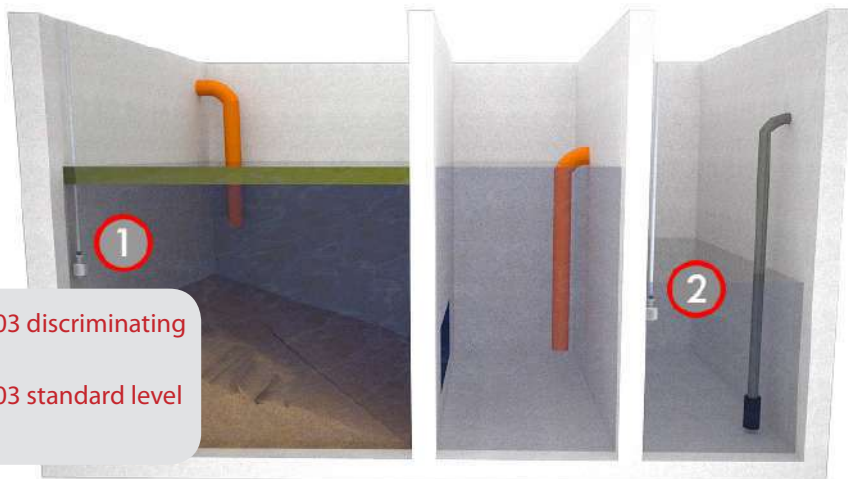
LOCAL SIGNAL SYSTEM with xenon lamp in red color.

Description	Code
Local signal system	AT17401/R



BUZZER for alarm signaling.

Description	Code
Buzzer	AT22412



1. CPTL07/P/15/9/00/004/03 discriminating level switch
2. CPTL07/P/15/3/00/004/03 standard level switch



### **Functioning description**

The system can be used in different ways, with the possibility of managing float switch inputs normally open or normally closed. The system also allows the visualization of active inputs and the output activation through led indicators, while the operating / alarm status is displayed by the led indicator accompanied by an acoustic signal, which is silenced by a reset alarm.

On output, there are the status functioning/alarm signals (OC1) and the alarm signal (OC2), to which a remote signal can be connected, the relay contacts (RL1), which can be used to activate a load (contactor), a positive voltage able of supplying additional accessories with a maximum power consumption of 100 mA.

The device can show the alarms even without the power supplied, using a 9 volt, normal or rechargeable battery.

There are four distinct modes of operation already programmed:

- **mode 0: disabled equipment**
- **mode 1: LIQUID PRESENCE/ABSENCE alarm version**
- **mode 2: 2RP CONTROL device alarm version**
- **mode 3: option of 2RP CONTROL device alarm version**

#### **Mode 0: dip switches 1 and 2 to OFF**

#### **Mode 0: dip switches 1 and 2 to ON**

The system consists of a level switch complete of a float (L1) calibrated to detect the change in state of a fluid that ranges from water to light hydrocarbon in the desolation tanks. The system controls this state change and generates a hydrocarbon presence warning signal. The alarm is activated by switching on the LED indicator (alarm) and activating the buzzer, which can be muted by pressing the RESET button for two seconds. The buzzer, if the cause of the alarm has not been cleared, will resume after a 2 hour time.

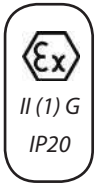
#### **Mode 2: dip switch 1 to ON and dip switch 2 to OFF**

The system consists of two floats, the first of the minimum level and the second of the maximum level (full). By increasing the liquid activates the full float (input 2), which activates the relay output (alarm) after time T. By activating the relay, the system controls the status of full and minimum floats that must return to the "rest" status (input 1 and input 2 off). If this condition does not occur, both the alarm, by displaying 4 LEDs of the LED (status) and the buzzer, silencing by pressing the RESET button for two seconds, are activated. The buzzer, if the cause of the alarm has not been cleared, will resume after a 2 hour time. In the event of anomalous hydrocarbons, the system generates a second alarm by displaying 2 flashes of the LED (status) and buzzer activation, which can be muted by pressing the RESET button for two seconds. Time T can be set from 1 second to 30 minutes via P2 trimmer.

#### **Mode 3: dip switch 2 to ON and dip switch 2 to OFF (optional)**

In this way, only one float is used, which can be positioned between the minimum and maximum level of the barrel. At float (input 1) activation, for increasing the liquid, the system activates the relay (alarm) after the time T1. By activating the relay, the float must return to the "rest" state (input 1 off) within T2, If this condition does not occur, both the alarm, by displaying 4 LEDs of the LED (status) and the buzzer, silencing by pressing the RESET button for two seconds, are activated. Time T1 and T2 can be set from 36 to 72 hours and 120 to 240 hours, respectively, via the P1 and P2 trimmer.

## LIQUID DETECTION MANAGEMENT SYSTEMS ANALOGIC SENSORS VERSION



TANK LEVEL AND ALARMS MONITORING CONTROL UNIT for 8 Intrinsically Safe Master Level series gauges.

N. of connectable level gauges		8	
N. of connectable sensors		8	
Marking		II (1) G [Ex ia] IIC T4	
Type	Data output	Alarms	Code
Basic	RS232/RS485	8 in/8 out	AT19810/A/N/08/08

### Accessories for liquid detection management system analogic sensors version



LEVEL GAUGE WITH FLOAT FOR FOIL OIL.

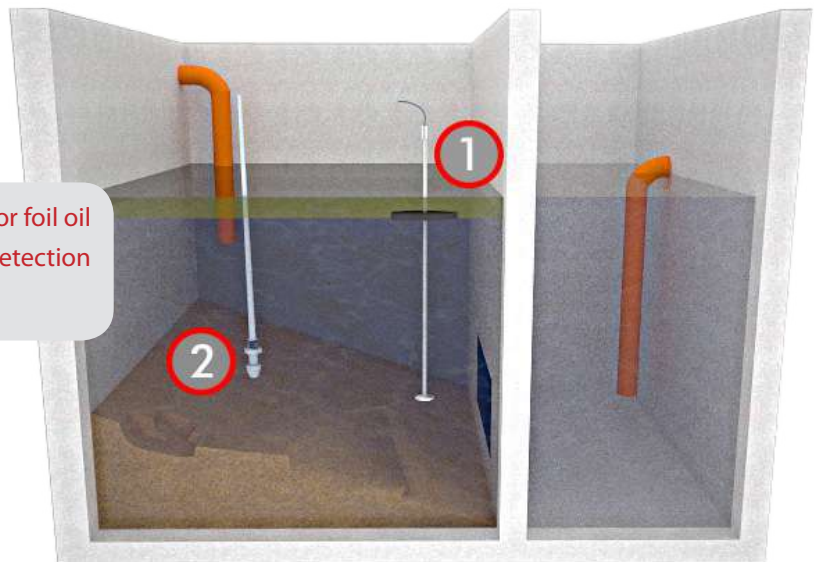
Measure range	1 ÷ 1000 mm
Measure accuracy	± 1 mm
Protection degree	IP68
Connection cable	PVC special, fuel and flame resistant, M12 plug
Length	1900 mm
Marking	ATEX II 1G Ex ia IIC T6...T5 Ga
Description	Code
Sensor with float for foil oil	AT10117



ULTRASOUND SENSOR FOR THE DETECTION OF MUSHROOMS/MORTS at the bottom of the tank and temperature.

Measure range	200 ÷ 1000 mm
Measure accuracy	± 5 mm
Protection degree	IP68
Connection cable	PVC special, fuel and flame resistant, 5 m length
Marking	ATEX II 1G Ex ia IIB 4T Ga
Description	Code
Ultrasound sensor for the detection of mushrooms and morts	AT10017

1. AT10117 level gauge with float for foil oil
2. AT10017 ultrasound sensor for detection mushrooms/morts



# AUTOMATION FOR FLEETS REFUELING STATIONS



## AT12 SERIES CPTH02 DELIVERY MANAGEMENT SYSTEM

### AT12 SERIES CPTH02 DELIVERY MANAGEMENT SYSTEM TO INTEGRATE ON THE DISPENSER



CPTH02 DELIVERY MANAGEMENT SYSTEM, to be integrated directly on the dispenser's calculating device. It is managed by the CPTH02 calculating device through the AT43006 interface kit and it has a data delivery rescue unit inside. Operator panel and HF transponder reader optional.

N. of associated dispensers	1÷2
N. of associated level gauges	1÷2
Users	100 (1000 on request)
Memorized transactions	1000
Remote data connection	LAN
Version	Code
Without panel, only HF transponder reader	AT12*/0/4
With panel, without HF transponder reader	AT12*/1/0
With panel and HF transponder reader	AT12*/1/4

(\*) AT12N for installation in AT15 dispenser

### AT12 SERIES CPTH02 DELIVERY MANAGEMENT SYSTEM STAND ALONE



CPTH02 DELIVERY MANAGEMENT SYSTEM, Stand Alone version. It communicates with the CPTH02 calculating device through the RS232/RS485 serial protocol and it has a data delivery rescue unit inside. Operator panel and HF transponder reader optional.

N. of associated dispensers	1÷2
N. of associated level gauges	1÷2
Users	100 (1000 on request)
Memorized transactions	1000
Remote data connection	LAN
Version	Code
Without panel, only HF transponder reader	AT12E/0/4
With panel, without HF transponder reader	AT12E/1/0
With panel and HF transponder reader	AT12E/1/4

## OPTIONS FOR AT12 SERIES CPTH02 DELIVERY MANAGEMENT SYSTEM



WATERPROOF LEVEL GAUGE for AdBlue®, additives and diesel.		
Product accuracy	± 0,5 mm	
Serial data transmission (*)	RS485 1: MTS / 2: SMT / 5: ALS /6: SMV	
Float	N.1 stainless steel Ø 45 mm (WP version) N. 2 stainless steel Ø 45 mm (3G version)	
Length (**)	Max 5 m	
Protection degree	IP68	
Marking	II 3G Ex ic IIB T6 Gc (only 3G version)	
Version	Product	Code
Waterproof IP68	AdBlue®	AT08919/WP/A/X*/XXXX**
Waterproof IP68	Additive	AT08919/WP/B/X*/XXXX**
Waterproof 3G	Diesel	AT08919/3G/D/X*/XXXX**





ACCESS POINT KIT consists of two remote devices and power supplies to connect point to point or network management system to PC or corporate network.

Description	Code
Access point kit	AT33902



POWERLAN ADAPTER consist of 2 devices for the networking of the AT12 refuelling management system through the existing AC power line.

Description	Code
PowerLan adapter	AT12221



3G ROUTER for connection to the refuelling management system via GPRS-UMTS network using a dedicated internet key.

Description	Code
3G ROUTER	AT04912



RFID HF BADGE FORMAT preprinted and pre-coded in a progressive way. (10 vehicle + 10 driver cards including with the dispenser)

Reading distance	2÷3 cm	
Description	Code	
HF badge for driver (10 pieces)	AT04712/A	
HF badge for vehicle (10 pieces)	AT04712/V	



RFID HF KEYRING FORMAT with accessories, to use as an alternative to transponder badge format.

Reading distance	2÷3 cm	
Description	Code	
Transponder HF keyring format	AT09110	



COPTERLITE ROOM management software for processing and displaying of data of AT12 systems.

Version	Code
Server Full for multiple plants	ATS01812/SFL
Server Full for one plant	ATS01812/SLT
Client	ATS01812/CFL

### AT12 automation functional diagram



### Example of application



## REFUELLING MANAGEMENT TERMINALS

### AT04 SERIES CPTT2 TERMINAL TO INTEGRATED ON THE FUEL DISPENSER



AT04 REFUELLING MANAGEMENT TERMINAL TO BE INTEGRATED IN THE DISPENSER. Complete with embedded industrial CPU, data rescue unit, 2X20 character backlit display, tamper proof metal keyboard.

N. of associated dispensers	8
N. of associated transponder reader	16
N. of associated level gauges	8
Memorized users	15000
Memorized transactions	15000
Remote data connection	LAN/RS232

Version	Code
Without reader	AT04/0
Magnetic bande badge reader	AT04/1
Transponder LF reader	AT04/2
Transponder HF reader	AT04/4
Magnetic bande and chip badge reader	AT04/3
Magnetic bande, chip badge and transponder reader	AT04/5



BUS RS485 INTERFACE KIT to be used for serial connection of AT series equipment for distances greater than 15 m.

Descrizione	Codice
BUS RS485 serial interface kit	AT02809/K

### AT07 SERIES STAND ALONE CPTT2 TERMINAL



AT07 REFUELLING MANAGEMENT STAND ALONE TERMINAL. Complete with embedded industrial CPU, data rescue unit, 2X20 character backlit display, tamper proof metal keyboard. Available with color graphic display (+ / G).

N. of associated dispensers	8
N. of associated transponder reader	16
N. of associated level gauges	8
Memorized users	15000
Memorized transactions	8000 (16000 optional)
Remote data connection	LAN/RS232
Dispensers interface (X)	A= C. Loop 2 heads, B= C. Loop 4 heads, C= RS485 8 heads, P= PumaLan (Gilbarco)

Version	Code
Without reader	AT07/0/X
Magnetic bande badge reader	AT07/1/X
Transponder LF reader	AT07/2/X
Transponder HF reader	AT07/4/X
Magnetic bande and chip badge reader	AT07/3/X
Magnetic bande, chip badge and transponder reader	AT07/5/X

Mechanical interface	AT17802
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## FORECOURT MANAGEMENT EQUIPMENT



"IDP" INTEGRATED INTERFACE for the complete management of a forecourt authorized to refuelling for company fleets. To be used when manual operations are not required.

Calculating device connection	Code
C. Loop 4 heads	AT42006/A/F
RS485 8 heads	AT42006/C/F
2 RS485 16 heads	AT42006/D/F
Local thermal printer 48 columns	AT01511

## ACCESSORIES FOR DELIVERY MANAGEMENT TERMINALS



WATERPROOF LEVEL GAUGE CONNECTION INTERFACE.	
N. of connectable gauges	1 (AT05310)
N. of connectable well sensors	2
Product	Diesel/Fluids
Description	Code
1 waterproof level gauge connection interface	AT05910/T



8 WATERPROOF LEVEL GAUGE CONNECTION INTERFACE.	
N. of connectable gauges	8 (AT05310)
N. of connectable well sensors	0
Product	Gasolio/Fluidi
Description	Code
8 waterproof level gauge connection interface	AT10010/T



8 INTRINSICALLY SAFE LEVEL GAUGE CONNECTION INTERFACE.	
N. of connectable gauges	8 (CPT11610)
N. of connectable well sensors	8
Product	Gasoline/Diesel/Fluids
Description	Code
8 intrinsically safe level gauge connection interface	AT09112/T



ALARM MANAGEMENT KIT. It reports, by switching a contact, one or more events (Warning level, Minimum or Maximum Level, etc.)	
N. of associated relays (XX)	4 (8 with option)
Communication interface	RS485
Description	Code
4 relay 12 VDC alarm management kit	AT05914/04/12



LOCAL TICKET PRINTER to print of the transaction at the end of the delivery.	
Description	Code
Local ticket printer	AT03220



## **DATA SENDING AND DOWNLOADING DEVICES** **FOR REFUELLING MANAGEMENT TERMINALS**



GSM-GPRS MODEM KIT (TERMINAL SIDE) for sending and receiving all the files on the terminal. An active SIM is required for data transmission.

Description	Code
GSM-GPRS modem kit (terminal side)	AT01808



GSM-GPRS MODEM KIT (PC SIDE) for sending and receiving all the files on the terminal. It is complete with modem, power supply and antenna.

Description	Code
GSM-GPRS modem kit (PC side)	AT22803/M



RS232/ETHERNET CONVERTER for converting signal from the LAN into an RS232 type .

Descrizione	Codice
RS232/ETHERNET converter	AT06919



POWERLAN ADAPTER consist of 2 devices for the networking of the AT04 and AT07 refuelling management system through the existing AC power line.

Description	Code
PowerLan adapter	AT12221



200 Mbps WIRELESS BRIDGE MODEM. Used to create a radio bridge that can receive or send data to remote equipment such as terminals, level switches etc. as an alternative to cable laying.

Description	Code
Wireless bridge modem kit	AT33902

9 dBi directional antenna	AT01606
8 dBi omnidirectional antenna	AT01706
14 dBi directional antenna for distances up to 1 km	AT01806
Cable for N M/M 7,5 antenna	AT01906
Filter for N M/F antenna	AT02006
Connection cable for N F RSMA F antenna 30 cm	AT02106
Connection cable for N M RSMA F antenna 3 m	AT02206



LAN PROTECTION KIT for use with terminal/personal computer connections over 30 m.

Description	Code
LAN protection kit	AT19510/K



FIBER OPTIC DATA TRANSMISSION KIT able to support distances up to 2 km, consisting of two network / fiber converters and associated power supplies.

Power supply	External with 12 VDC power supply included
Ports	1 RJ485 100 Base TX / 1 Optic fiber 100 Base FX
Data transmission speed	100 Mbps
Distance supported by fiber	Up to 2 Km (cable 62.5/125 o 50/125 $\mu$ m)
Certifications	CE e FCC Class B

Description	Code
Fiber optic data transmission kit	AT29207/K



OPTIC MULTIFIBER CABLE for maximum transmission distances 2 Km.

Description	Code
Optic multifiber cable	AT29307



CRIMP CONNECTOR XTC SC multimodal type.

Description	Code
Crimp connector	AT29407



OPTIC FIBER NETWORK KIT. Includes: pen with cutter, 2 syringes, strapperina, quick-release glue type A and B, cleaning fluid, cleaning disc for ST and SC, 2 dry / wet cleaning wipes, clevar scissor, crimping tool, brown diamond 6  $\mu$ m linting paper, purple 1  $\mu$ m, white 0,05  $\mu$ m and work surface.

Description	Code
Optic fiber network kit	AT29507



DATA CABLE, double insulation, for connecting of the management terminal.

Type	4X2XAWG 24/1 LSZH
Cable length	XXX m
Description	Code
Data cable	AT25007/XXX

## **MAGNETIC BADGE, MICROCHIP AND TRANSPONDER**



STANDARD BADGE WITH MAGNETIC BAND, pre-printed and precodified in a progressive, low-coercive type.

Description	Code
Standard badge with magnetic band	AT13104



MICROCHIP BADGE.

Magnetic badge	Print	Code
No	Absent	AT12604/S/N
No	1 colour	AT12604/S/C
No	In polychrome	AT12604/S/P
Magnetised	Absent	AT12604/M/N
Magnetized	1 colour	AT12604/M/C
Magnetized	In polychrome	AT12604/M/P



TRANSPONDER LF BADGE FORMAT, programmed read-only (2 ÷ 3 cm).

Programming	Print	Code
Yes	Neutral	AT03701/R/N
Yes	Label with logo and code	AT03701/R/S



TRANSPONDER HF BADGE FORMAT, read-only (2÷3 cm).

Magnetic band	Print	Code
No	Absent	AT27807/S/N
No	1 colour	AT27807/S/C
No	In polychrome	AT27807/S/P
Yes	Absent	AT27807/M/N
Yes	1 colour	AT27807/M/C
Yes	In polychrome	AT27807/M/P



TRANSPONDER LF KEYRING FORMAT only reed (2 ÷ 5 cm) with accessories. Replacing the badge format transponder.

Description	Code
Transponder LF keyring format	AT03801/R



AT09110

AT04812

TRANSPONDER HF KEYRING FORMAT only reed (2 ÷ 3 cm) with accessories. Replacing the badge format transponder.

Version	Code
Standard	AT09110
Customizable according to customer specification	AT04812

## VEHICLE IDENTIFICATION AND DATA DOWNLOADING

### PASSIVE TRANSPONDER FOR TANK VEHICLE WIRELESS DETECTION SYSTEM



#### RFID WIRELESS ANTENNA KIT FOR ZVA DELIVERY NOZZLE.

Frequency	868 MHz
Reading distance	10 m
Version	Code
ZVA 25 HS (High sensitivity ) nozzle	CPT03119/4
ZVA SL2 HS (High sensitivity) nozzle	CPT03119/5
ZVA SL2 GR nozzle	CPT03119/6
ZVA AdBlue® nozzle	CPT03119/7



#### PROGRAMMING KIT for CPT33107 RFID wireless antenna.

N. of lanes	N. of nozzle	Code
XX	YY	AT12717/XX/YY



#### VEHICULAR DISC TRANSPONDER KIT complete with mounting bracket.

Dimensions	Mounting	Version	Code
Ø 40 mm	With rivets (included)	For trucks, buses	AT09415
Ø 40 mm	Whit clamp (included)	For trucks, buses	AT09515
Ø 20 mm	With rivet (included)	For light vehicles	AT02916



#### QUICK CUP with integrated RFID.

Anti-theft	RFID	Anti-theft contact	Lock	Code
Present	134 kHz RW	Absent	Absent	AT09919/1/1/0/0
Present	134 kHz RO	Absent	Absent	AT09919/1/2/0/0



#### RADIO RECEIVER to communicate with wireless devices installed on the nozzle.

Power supply	5÷30 VDC
Consumption	12÷30 mA
Radio frequency	868 MHz
Data output	RS232/RS485
Connectable nozzles	8
Description	Code
Radio receiver for wireless nozzle	AT12212/A/8/N



#### ROOF ANTENNA.

Radio frequency	868 MHz
Description	Code
868 MHz roof antenna	AT09615



#### Amber colored LED SIGNAL.

Description	Code
Led signal	AT20916
Led signal with IP56 enclosure	AT20916/A





SIGNAL LIGHT with cable.

Description	Code
Signal light with cable	AT09915



GSETUP SOFTWARE for wireless nozzle programming.

Description	Code
GSETUP programming software	ATS01811



DRADIOTRACE2 VEHICULAR RADIO for downloading kilometers, hours of operation and fuel level. In metal container. To be installed on mobile vehicles.

Power supply	5÷30 VDC
Consumption	5÷25 mA
Radio frequency	868 ÷ 928 MHz
Description	Code
DARADIOTRACE2 vehicular radio	AT06012
RADIO/GSM/UMTS Triband antenna from glass	AT04305
90° stylus antenna	AT10012
Connection cable + mounting bracket	AT09612
Radio setup software	ATS01905

**Examples of application for wireless antenna and vehicular transponder**



## VEHICULAR DATA WIRELESS DOWNLOADING DEVICES



RADIO RECEIVER with built-in antenna to be connected to the terminal or IDP controller for data download via radio or for interfacing with the AT06012 vehicular radio.

Power supply	5÷30 VDC
Consumption	12÷30 mA
Radio frequency	868 MHz
Data output	RS232/RS485
Description	Code
Radio receiver	AT12212/A/8/N



DRADIOTRACE2 VEHICULAR RADIO for downloading kilometers, hours of operation and fuel level. In metal container. To be installed on mobile vehicles.

Power supply	5÷30 VDC
Consumption	5÷25 mA
Radio frequency	868 ÷ 928 MHz
Description	Code
DARADIOTRACE2 vehicular radio	AT06012
RADIO/GSM/UMTS Triband antenna from glass	AT04305
90° stylus antenna	AT10012
Connection cable + mounting bracket	AT09612
Radio setup software	ATS01905



VEHICULAR RADIO SIMULATOR KIT used to verify the correct functionality of signals from the vehicle to which the AT06012 series radio will be collaged and to verify the correct reception of the AT12212 series radio base signals on the management terminals.

Description	Code
Vehicular radio simulator kit	AT19610/K



RADIO/TRANSPONDER READER/PROGRAMMER for reading code stored on passive transponders and sending to the AT06012 vehicular radio and for reading data and programming the radio itself.

Description	Code
Radio/transponder reader/programmer	AT09812

## SPASSIVE TRANSPONDER FOR WINDSCREEN VEHICLE WIRELESS DETECTION SYSTEM



MEDIUM RANGE UHF READER for vehicle identification, with integrated antenna.	
Power supply	12-24 VAC $\pm$ 10%
Identification range	2 ÷ 4 m
Identification	Only read
Interfaces	RS422, RS485, USB
<i>Description</i>	<i>Code</i>
Medium Range UHF range	AT01918



LONG RANGE UHF READER for vehicle identification, with integrated antenna.	
Power supply	12-24 VAC $\pm$ 10%
Identification range	2 ÷ 4 m
Identification	Only read
Interfaces	RS422, RS485, USB
<i>Description</i>	<i>Code</i>
Long Range UHF reader	AT12110

Connection interface to forecourt terminal	AT00816
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### Accessories for UHF reader



WALL MOUNTING KIT adjustable.	
Mounting height	Max 2 m
<i>Description</i>	<i>Code</i>
Wall mounting bracket for AT12110 reader	AT12210
Wall mounting bracket for AT01918 reader	AT13418



POLE MOUNTING KIT.	
Mounting height	Max 2 m
<i>Description</i>	<i>Code</i>
Pole mounting bracket	AT12310

## VEHICULAR AND DRIVERS/PASSENGERS PASSIVES TRANSPONDER



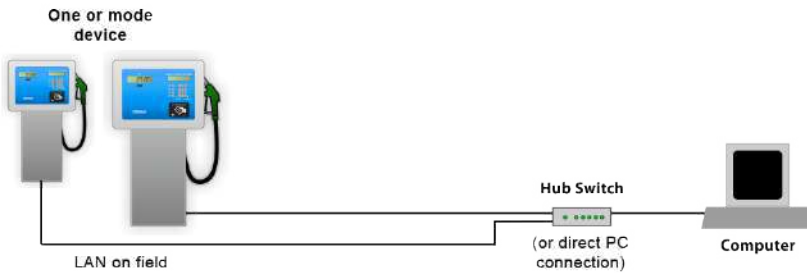
VEHICULAR PASSIVE UHF TAG wide range for vehicle identification via the AT12110 and AT01918 readers. Equipped with a sticker that allows fast and easy installation on the windscreen inside the vehicle.	
Operating frequency	850-950 MHz
Identification range	Max 4 m
Identification	Only reading
<i>Version</i>	<i>Code</i>
Standard	AT12410
Tamperproof	AT12510



LIGHT LAMP 2 colors 24 VDC.	
<i>Description</i>	<i>Code</i>
Light lamp with 2 color elements	AT18005/2/012

## Possible connection modes for data unloading

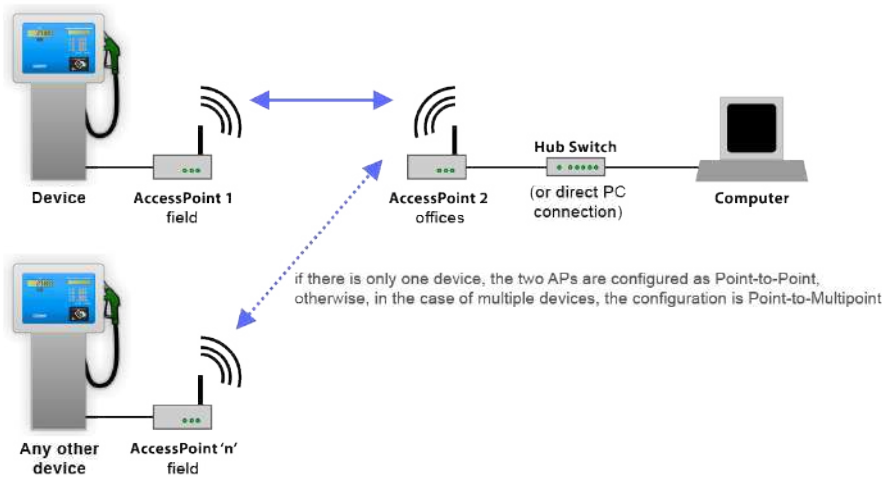
### WIRED CONFIGURATION



#### CHARACTERISTICS

The solution through network wiring is the preferred one among them, but there must be the possibility of bringing a LAN (via ethernet or fiber) to the field, where the devices are connected to the corporate network. A VPN connection over the Internet is equivalent

### WIRELESS BRIDGE POINT-TO-POINT OR POINT-TO-MULTIPOINT CONFIGURATION



#### CHARACTERISTICS

The wireless bridge solution allows one or more devices to be connected to the corporate network where it is impossible or unprofitable to place a network cable. Depending on the specific installation type, to be evaluated case by case, you can use the appropriate directional antennas to ensure the best signal quality and full coverage of the distance to travel. The feasibility is always to be assessed depending on the distances between the wireless antennas and the possible presence of obstacles or interference between them.

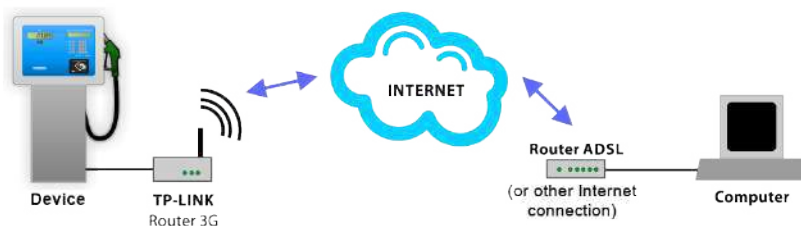
### WIRELESS ACCESS POINT CONFIGURATION



#### CHARACTERISTICS

Where there is no corporate network and there is no need to have real-time device data on the information systems, you can use a simple AccessPoint mode, using a notebook or other device to connect close to your device.

### CONFIGURATION BETWEEN INTERNET ON MOBILE NETWORK CONNECTION (3G)



#### CHARACTERISTICS

A 3G connection through the 3G network is useful in remote installations without any kind of connectivity. With an Internet key, a suitable SIM and a dynamic DNS service, you can communicate with devices wherever there is an Internet connection.



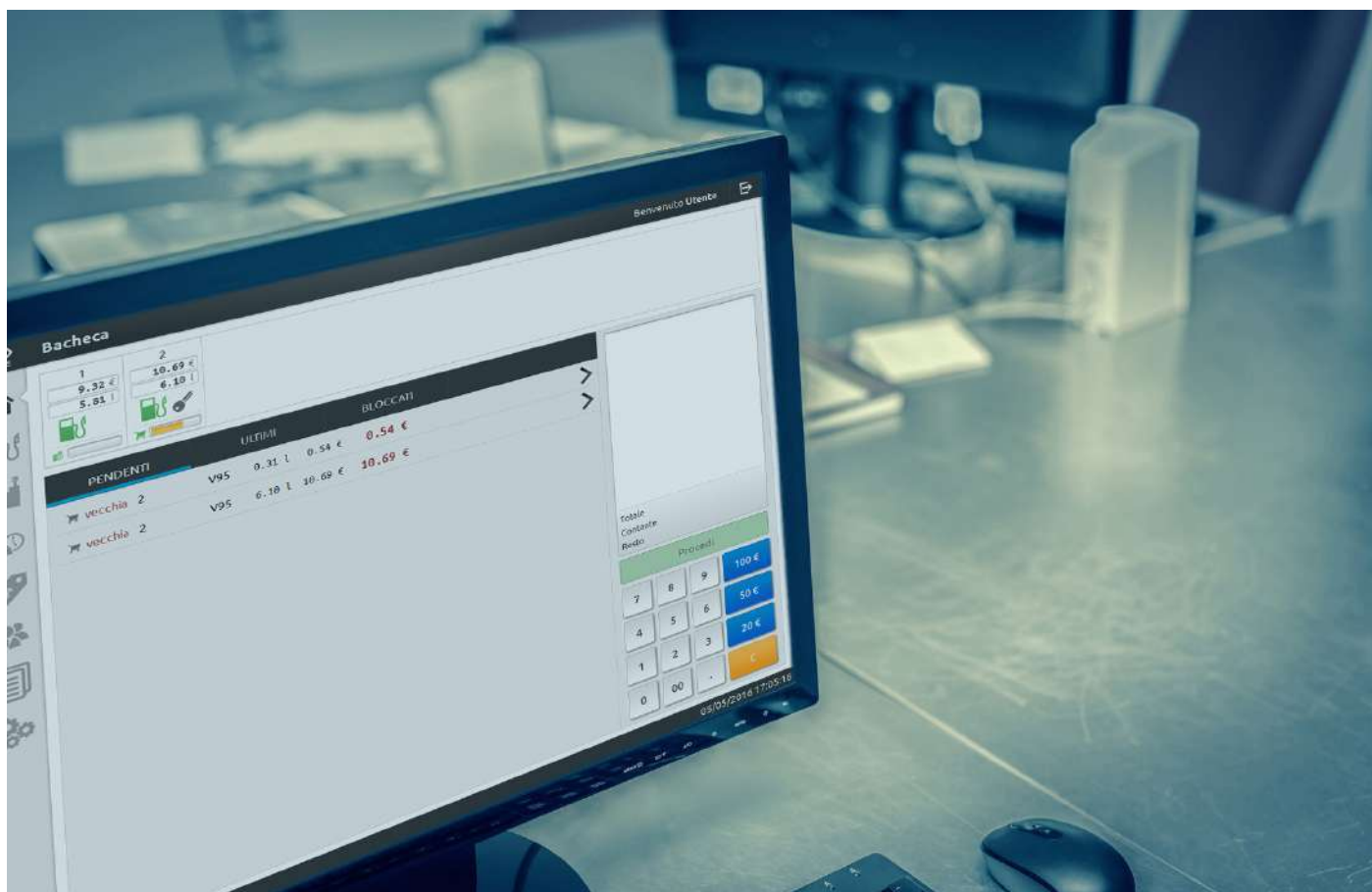
**Automation refueling station functional diagram**



<div> <div>OPTIONS</div> <div>AUTO-MATION LEVEL</div> </div>	<div> <div> <div>keyboard</div> <div>RFID card and/or key fob</div> <div>tank cap with RFID integrated</div> <div>UHF tag long range</div> <div>dRadioTrace on odometer o canbus</div> </div> </div>				
<b>LEVEL 1</b> Manual data entry	✓	✗		✗	✗
<b>LEVEL 2</b> Identification of driver and/or vehicle easier	✓	✓		✗	✗
<b>LEVEL 3</b> Automatic vehicle identification	✓	✓		✓	✗
<b>LEVEL 4</b> Automatic vehicle Km reading	✓	✓		✓	✓

## This image shows a full page of blank, lined paper. It features approximately 28 horizontal blue lines spaced evenly across the page, typical of standard notebook paper. The lines are thin and light blue, set against a plain white background. There are no margins, text, or other markings on the page.

# REFUELING MANAGEMENT SOFTWARE



## DATA PROCESSING SOFTWARE FOR CPTH02 SERIES WITH AT12 COMPUTING HEAD FOR REFUELING MANAGEMENT

To be installed on personal computers connected via LAN to AT12 and CPTH02 computing head.

### Minimum requirements of the management PC

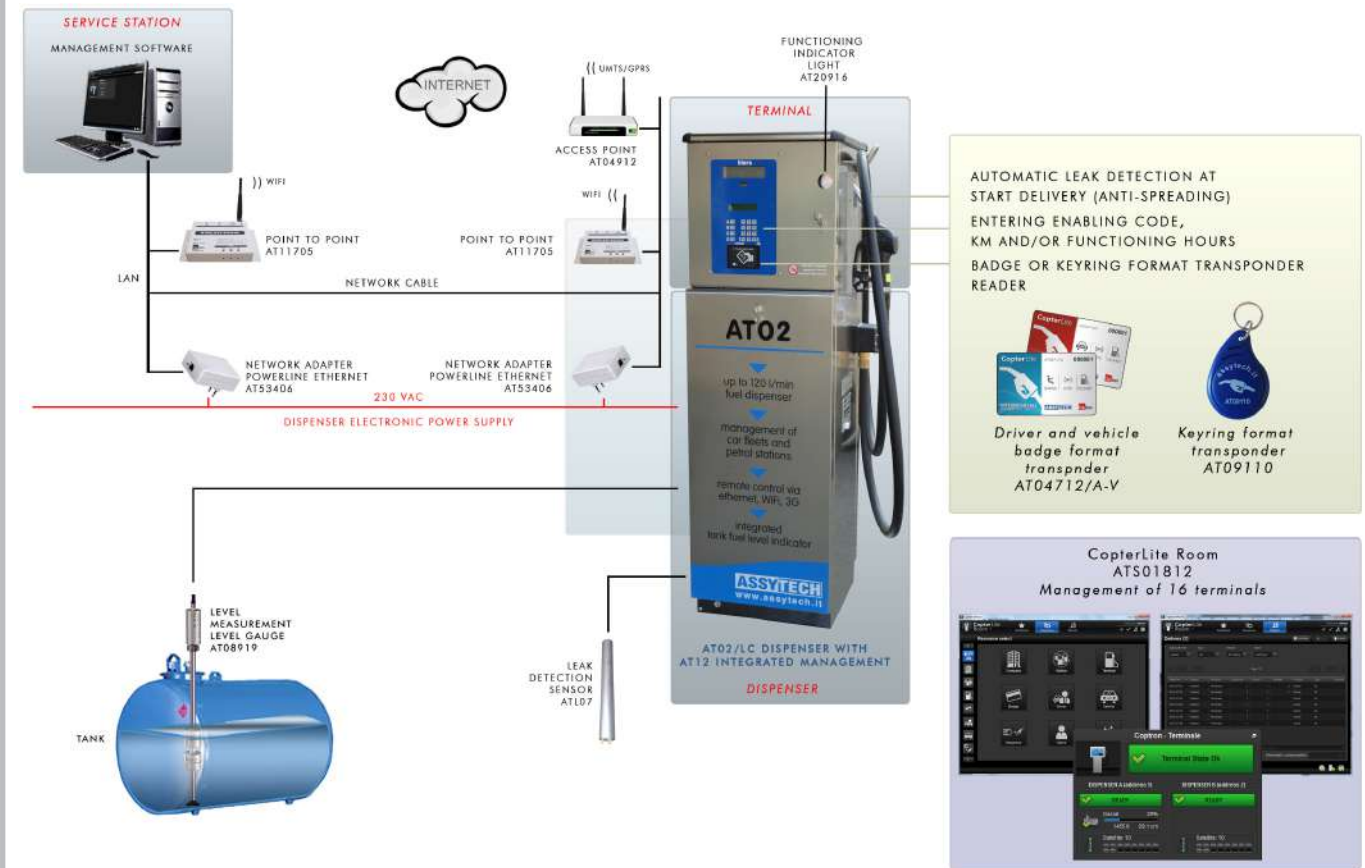
Model	PC DESK-TOP or MINI TOWER
Processor	Core 2 Duo
Hard Disk	80 GB
RAM	1024 MB
Video resolution	1024x768
Interfaces	1 LAN
Operating system	WIN XP PRO SP1, WIN 2003 Server, Windows VISTA, Windows Server 2008, Windows 7/8/10



COPTERLITE ROOM SOFTWARE for processing and displaying AT12 system data.

Version	Code
Server Full for multiple plants managing	ATS01812/SFL
Server Lite for one plant managing	ATS01812/SLT
Client	ATS01812/CFL

### CopterLite Room software functional diagram





## DATA PROCESSING SOFTWARE FOR REFUELING MANAGEMENT

To be installed on personal computers connected via LAN to terminals.

### Minimum requirements of the server and management PC

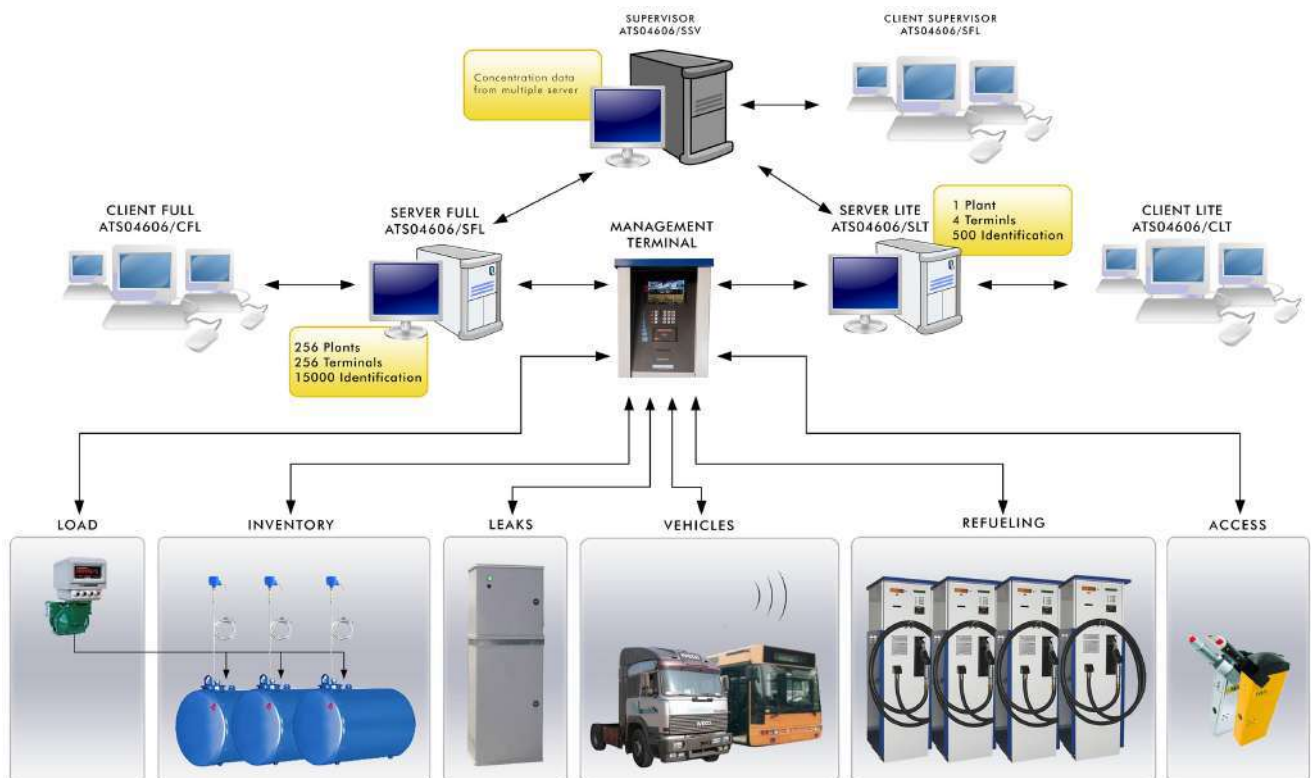
	Server	Management PC
Model	PC DESK-TOP or MINI TOWER	PC DESK-TOP or MINI TOWER
Processor	Intel Xeon E3	Intel i3
Hard Disk	100 GB	100 GB
RAM	4 GB	4 GB
Video resolution	1024x768	1024x768
Interfaces	1 LAN, 2 USB	1 LAN
Operating system	Win 2008	Windows 7/8/10



OTCONTROL TRE SOFTWARE for processing and displaying data from Host. Available in Supervisor, Server, Server Lite and each in Client variants (for data display only).

Versione	Codice
Supervisore Full	ATS04606/SSV
Supervisore Client	ATS04606/CSV
Server Full for multiple plants management	ATS04606/SFL
Server Lite for one plant management	ATS04606/SLT
Client Full	ATS04606/CFL
Client Lite	ATS04606/CLT

### OTControl Tre software functional diagram

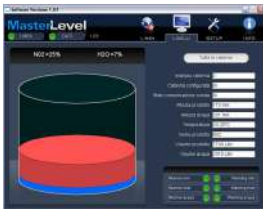


## PROGRAMMING AND DISPLAYING SOFTWARE TANKS DATA

To be installed on a Personal Computer connected through LAN to the level control units.

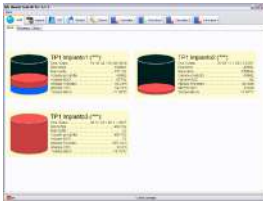
### Minimum requirements of the server and management PC

	Server	PC di gestione
Model	PC DESK-TOP or MINI TOWER	PC DESK-TOP or MINI TOWER
Processor	Intel Xeon E3	Intel i3
Hard Disk	100 GB	100 GB
RAM	4 GB	4 GB
Video resolution	1024x768	1024x768
Interfaces	1 LAN, 2 USB	1 LAN
Operating system	Win 2008	Windows 7/8/10



MASTERLEVEL SETUP SOFTWARE for programming level control units and displaying data.

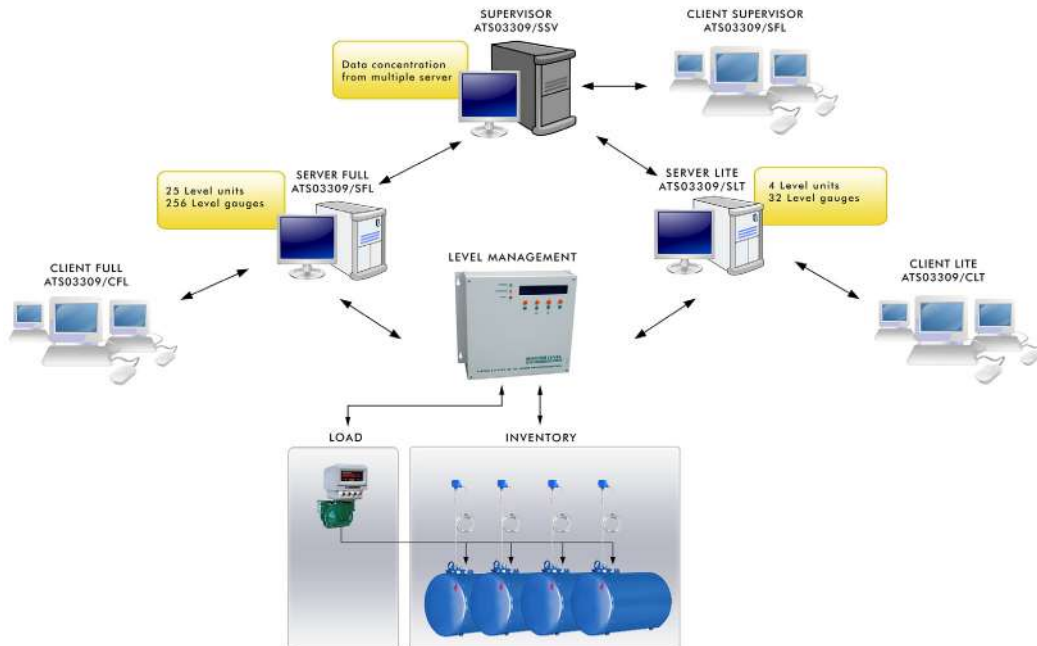
Version	Code
MasterLevel Setup	ATS0108



MASTERTANK TRE SOFTWARE for processing and displaying data from the level control units from Host. Available in Supervisor, Server, Server Lite and each in Client variants (for data display only).

Version	Code
Supervisore Full	ATS03309/SSV
Supervisore Client	ATS03309/CSV
Server Full for multiple plants management	ATS03309/SFL
Server Lite for one plant management	ATS03309/SLT
Client Full	ATS03309/CFL
Client Lite	ATS03309/CLT

### MaterTank Tre software functional diagram



# ACCESS CONTROL



## VEHICLE ENTRANCE GATE

### ACTIVE READER



LONG RANGE READER for reading active tags, complete with fixing bracket.	
Power supply	10÷28 VDC (power supply esclused)
Reading range	Max 6 m
Protection	IP65
<i>Description</i>	<i>Code</i>
Long Range reader	AT16308

### ACTIVE TRANSPONDER



MULTIPLE READING R/O TAG to be used with the Long Range reader to identify the vehicle associated with it.	
Format	Badge
Thickness	3 mm
<i>Descrizione</i>	<i>Codice</i>
Multiple reading R/O tag	AT16408

### PASSIVE UHF READER



UHF LONG RANGE READER for vehicle identification, with integrated antenna.	
Power supply	12-24 VAC ± 10%
Reading range	4 ÷ 8 m
Identification	Only reading
Interfaces	RS232, RS422
<i>Description</i>	<i>Code</i>
UHF Long Range reader	AT12110

### Accessories for passive UHF reader



ADJUSTABLE WALL-MOUNTING KIT.	
Mounting height	Max 2 m
<i>Description</i>	<i>Code</i>
Wall-mounting kit	AT12210



POLE-MOUNTING KIT.	
Mounting height	Max 2 m
<i>Description</i>	<i>Code</i>
Pole-mounting kit	AT12310



## VEHICULAR AND DRIVERS/PASSENGERS PASSIVES TRANSPONDER



VEHICULAR PASSIVE UHF TAG wide range for vehicle identification via the AT12110 readers. Equipped with a sticker that allows fast and easy installation on the windscreen inside the vehicle.

Operating frequency	850-950 MHz
Standard	EPC Gen 2
Identification range	Max 4 m
Identification	Only reading
Version	Code
Standard	AT12410
Tamperproof	AT12510



UHF BADGE ISO wide range.

Identification range	Max 3 m
Version	Code
Standard	AT12610
With magnetic band	AT12710



COMBINED ISO UHF-MIFARE-EM-LEGIC-HID BADGE.

Operating frequency	UHF 850-950 MHz & 12.56 MHz Mifare
Standard	ISO 7816, EPC Gen 2
Identification range	Max 3 m
Description	Code
Combined ISO UHF-Mifare badge	AT12910

## ACCESSORIES



POWER SUPPLY for UHF antenna and light.

Power supply	24 VDC
Current	1,5 A
Description	Code
Power supply	AT14905



Tag badge format holder.

Description	Code
Tag holder	AT16508



MODULAR LIGHT LAMP with 2 or 3 color elements.

Power supply	12 VDC $\pm$ 10% 1,5 W
Lamp	A LED
Diameter	100 mm
Protection degree	IP65
Description	Code
Light lamp with 2 color elements	AT18005/2/012

Light lamp substain	AT18105
Relay kit	AT20505
Reader substain	AT11109

## OFFICE



IDP INTERFACE for access identification.		
Connectable readers	16	
Data interface	LAN	
<i>Connection type</i>		<i>Code</i>
2 RS485		AT42006/D/A
1 RS422		AT42006/E/A



BUS RS485 SERIAL INTERFACE KIT to be used to connect the measuring units to the PC when distances exceed 15 m.	
<i>Description</i>	<i>Code</i>
BUS RS485 serial interface kit	AT02809/K



OTCONTROL TRE SOFTWARE for processing and viewing data from Host. Available in Supervisor, Server, Server Lite and each in Client variants (for data display only).	
<i>Versione</i>	<i>Codice</i>
Server Full	ATS04606/SFL
Server Lite	ATS04606/SLT
Client Full	ATS04606/CFL
Client Lite	ATS04606/CLT

# ALARM SYSTEM FOR WELLS



## COMPONENTS OF THE ALARM SYSTEM FOR WELLS



MANHOLE COVERS OPENING ALARM for underground tanks, complete with fixing kit.	
Maximum switching voltage	28,8 VDC
Max switching current	0,5 A
Cable	Shielded PVC, std length 5 m
Output function	Switch/Commutation
Protection degree	IP68 (cable output IP67)
Marking	ATEX II 1G Ex ma IIC T6 Ga
<i>Description</i>	<i>Code</i>
Manhole covers opening alarm	AT08010

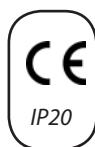


VOLUMETRIC SENSOR (reflected wave) FOR THE DETECTION OF MANHOLE COVERS OPENING for underground tanks, complete with accessories necessary for installation inside underground wells.	
Power supply	12 VDC
Max switching current	0,5 A
Cable	Shielded PVC, std length 5 m
Output function	Switch
Protection degree	IP68 (output cable IP67)
Marking	ATEX II 2G Ex ma IIC T6 Ga
<i>Output</i>	<i>Code</i>
On/Off	AT04213/A/05
RS485	AT04213/B/05
4÷20 mA	AT04213/C/05



PROTECTION CIRCUIT FOR Ex m DEVICES, to be used with the level switches, with the purpose of limiting the voltage and current within the specified limits.	
Use	Zone 0 and 1
<i>Description</i>	<i>Code</i>
Protection circuit for Ex m devices	AT17511/A





4/8/12/16 ALARMS MANAGEMENT INPUT AND MAXIMUM 4 PROGRAMMABLE OUTPUTS ACTIVATION CONTROL UNIT, for internal use. The system can be configured to perform a diverse set of functions (monitoring, reporting, alarm, etc.) based on the features and requirements of the system.

Power supply	230 VAC	
Consumption	25 VA	
N. connectable sensors	4÷16	
Sensor connection type	ON/OFF; BUS RS485	
Relay output	4	
N. sensors	Sensor type	Code
4	Ex ma	AT39102/04/IM/B
8	Ex ma	AT39102/08/IM/B
12	Ex ma	AT39102/12/IM/B
16	Ex ma	AT39102/16/IM/B



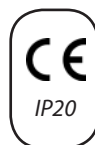
OUTDOOR ELECTRO ACOUSTIC SIGNAL DEVICE. The alarm is switched off only when the alarm is reset.

Description	Code
Remote alarm	AT15507



REMOTE KEYBOARD for external activation of the alarm management unit.

Description	Code
Remote keyboard	AT03612



READING ACTIVATION DEVICE for transponder LF badge or key format.

Descrizione	Codice
Remote transponder reading	AT03812



PROGRAMMED LF TRANSPONDER BADGE FORMAT, only reading (2÷3 cm).

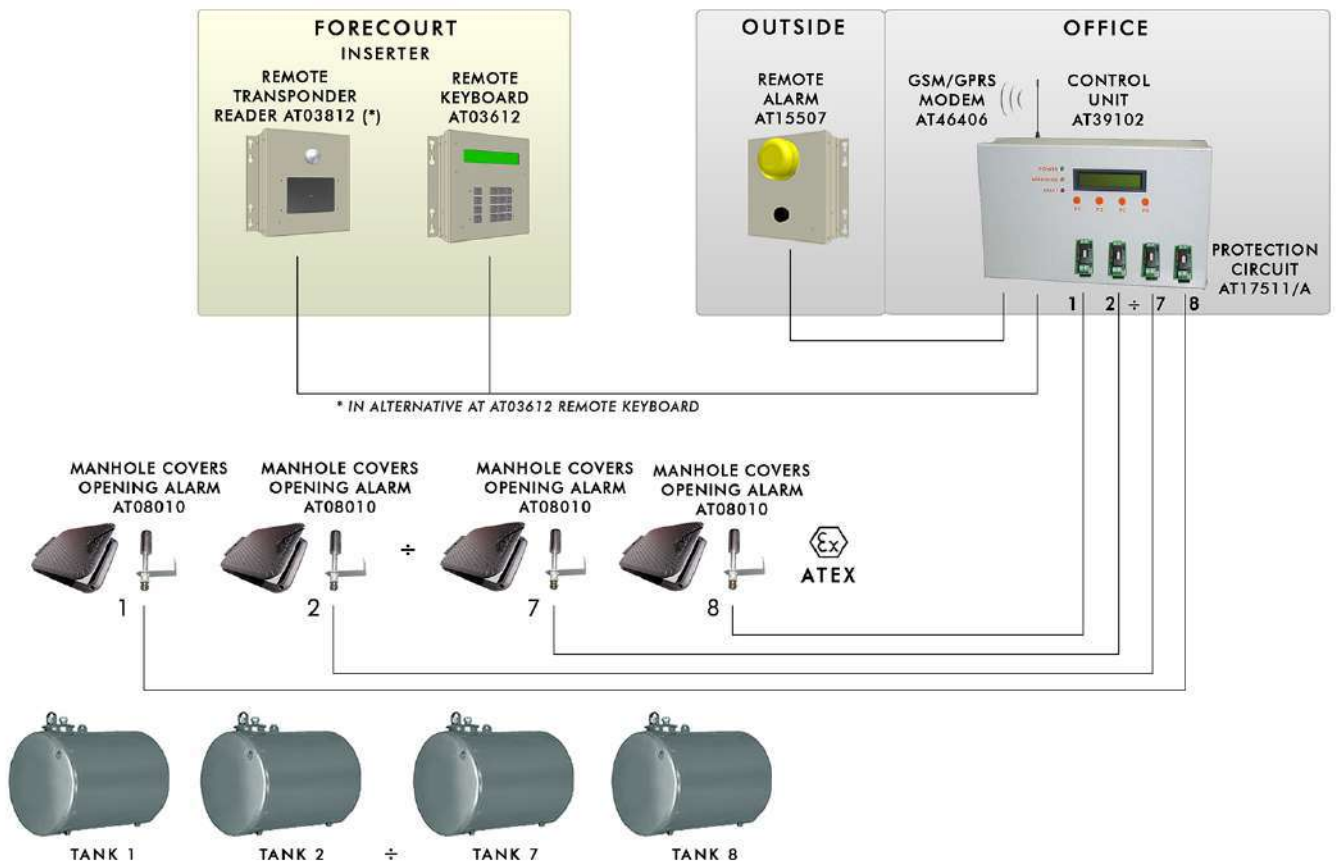
Programming	Print	Code
Si	Neutral	AT03701/R/N
Si	Etichetta con logo e codice	AT03701/R/S



LF TRANSPONDER KEYRING FORMAT, only reading (2÷5 cm). Replaces transponder badge.

Description	Code
LF transponder keyring format	AT03801/R

**Manhole cover opening alarms funcional diagram**



# **CENTRALIZED WELL LOCKING SYSTEM**

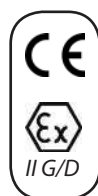


## PNEUMATIC LOCKS



Lock for tank well

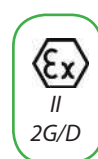
PNEUMATIC LOCK to block manhole opening covers of the tanks.			
Power pressure		4÷6 bar	
Operating temperature		-20°C ÷ +60°C	
Actuator marking		ATEX Ex II G/D c T6	
Couple (6 bar)	Version	Antitheft	Code
9 nM	With spring return	Absent	AT00214/1/S/P/A
9 nM	With spring return	Present	AT00214/1/S/P/P
9 nM	With pneumatic return	Absent	AT00214/1/D/P/A
9 nM	With pneumatic return	Present	AT00214/1/D/P/P
22 nM	With spring return	Absent	AT00214/2/S/P/A
22 nM	With spring return	Present	AT00214/2/S/P/P
22 nM	With pneumatic return	Absent	AT00214/2/D/P/A
22 nM	With pneumatic return	Present	AT00214/2/D/P/P
33 nM	With spring return	Absent	AT00214/3/S/P/A
33 nM	With spring return	Present	AT00214/3/S/P/P
33 nM	With pneumatic return	Absent	AT00214/3/D/P/A
33 nM	With pneumatic return	Present	AT00214/3/D/P/P



Lock for centralized loading

PNEUMATIC LOCK to block centralized load compartment opening coverd.			
Power pressure		4÷6 bar	
Operating temperature		-20°C ÷ +60°C	
Actuator marking		ATEX Ex II G/D c T6	
Couple (6 bar)	Version	Antitheft	Code
9 nM	With spring return	Absent	AT00214/1/S/C/A
9 nM	With spring return	Present	AT00214/1/S/C/P
9 nM	With pneumatic return	Absent	AT00214/1/D/C/A
9 nM	With pneumatic return	Present	AT00214/1/D/C/P
22 nM	With spring return	Absent	AT00214/2/S/C/A
22 nM	With spring return	Present	AT00214/2/S/C/P
22 nM	With pneumatic return	Absent	AT00214/2/D/C/A
22 nM	With pneumatic return	Present	AT00214/2/D/C/P
33 nM	With spring return	Absent	AT00214/3/S/C/A
33 nM	With spring return	Present	AT00214/3/S/C/P
33 nM	With pneumatic return	Absent	AT00214/3/D/C/A
33 nM	With pneumatic return	Present	AT00214/3/D/C/P

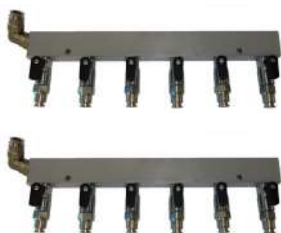
### Command devices for LDS08 cabinet



RILSAN PA12 anti-static and fire-retardant black hose. Designed and manufactured for plants and machinery ATEX II 2 G / D.

Packing	Code
100 m	AT10611/06/N

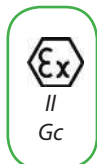




2 COLLECTORS KIT for the connection of manhole covers to be integrated leak control cabinet complete with mounting brackets. (1 input and 6 couplings for collector).

N. of inputs	1 for collector
Quick coupler	6 for collector

Description	Code
Pneumatic connection kit for LDS08	AT20514/K



5/2 1/8" BSP PNEUMATIC VALVE spring return with 230 VAC 3 W coil for the opening and closing of pneumatic locks. Complete with fixing bracket.

Marking	ATEX II 2 Gc IIC T5 / II 2 Dc T100°C
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Description	Code
5/2 1/8" GAS pneumatic valve	AT007715/230



HOUSING FOR COLLECTORS KIT AND PNEUMATIC VALVE.

Dimensions	540X310H580 mm
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Description	Code
Container for collectors kit and pneumatic valve	AT06916

## CONTROL UNIT



CONTROL UNIT available with power supply with compressed air, including compressor and with graphical display.

Power supply	100-240 VAC
ConsumPTION	5÷15 W (100 W with compressor)
N. of activated locks	6
Compressed air	6 bar
Connection	6 mm (Ø external)
Local alarm	Optical acoustic
Remote alarm	Lack of power, failure or attempted theft 2 free voltage contacts 24 VDC 0.5A
Operating temperature	-10°C ÷ +40°C

Power supply	Version	Code
Without compressor	Standard	AT20014/6/A/S
With compressor	Standard	AT20014/6/C/S
Without compressor	Graphic display	AT20014/6/A/G
With compressor	Graphic display	AT20014/6/C/G

## Options for control unit



2-CHANNEL RADIO RECEIVER for receiving keyboard commands and remote control, to be combined with AT20014 control unit series.

Description	Code
2-Channel radio receiver	AT20814



GSM/GPRS MODEM complete of 900 ÷ 1800 MHz antenna with magnetic base for data management and alarms via GSM connection.

Description	Code
GSM/GPRS modem complete of 900 ÷ 1800 MHz antenna with magnetic base	AT06706

## Accessories for control unit



2-CHANNELS KEYBOARD, vandal proof, for exterior wall with wireless connection, for the activation of one or two independent series of manholes. The keyboard needs of AT20814 receiver.

Power supply	Battery (lasting about 2 years with 10 transmissions per day)
Transmission range	80 m without obstacles / 50 m with obstacles
Description	Code
2-Channel keyboard for outdoor	AT20614



OUTDOOR ENCLOSURE for 2-channel keyboard. Optional.

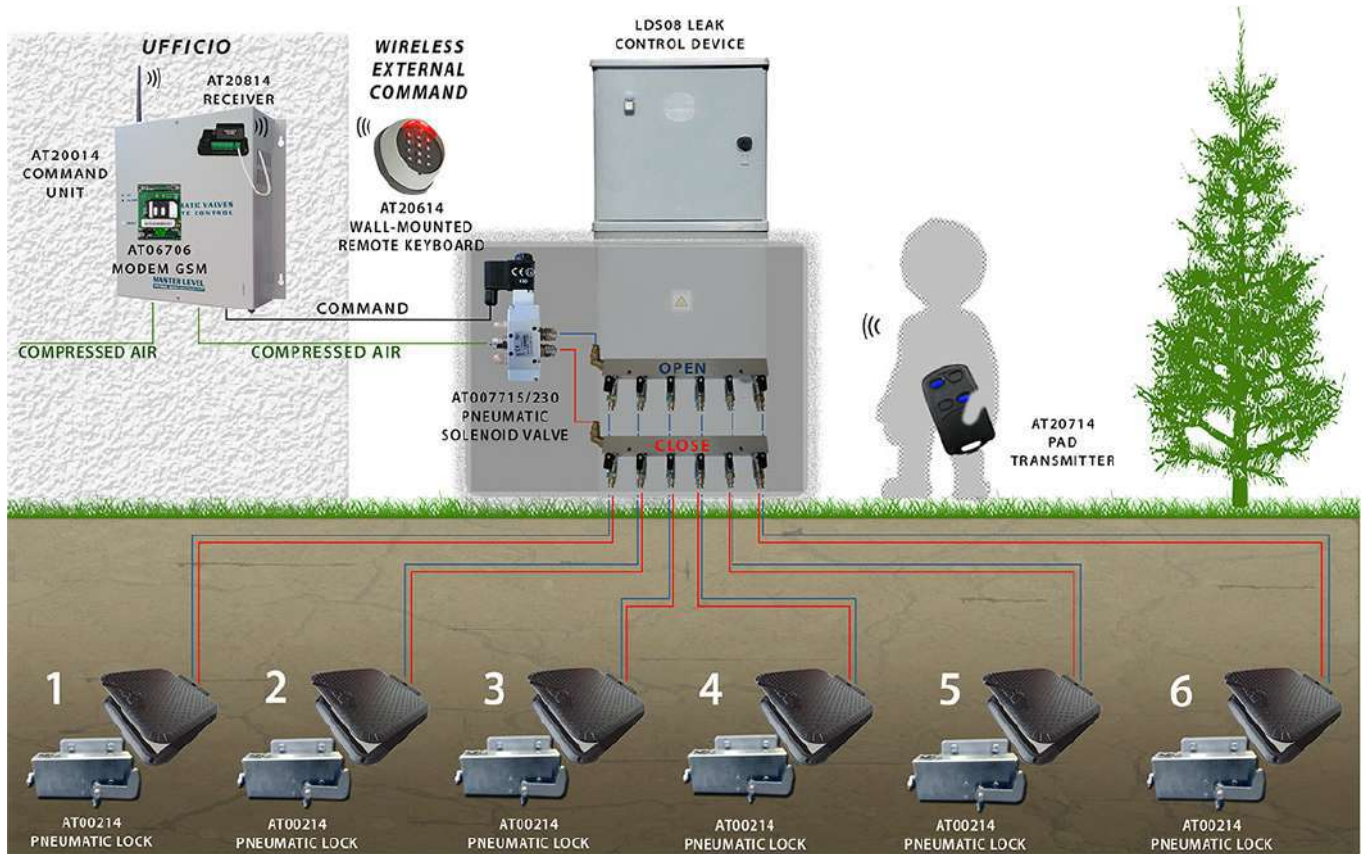
Description	Code
Outdoor panel for AT20614 keyboard	AT05215



2-CHANNEL PAD TRANSMITTER for the activation of one or two independent series of manholes. The transmitter needs of AT20814 receiver.

Power supply	Battery (lasting about 2 years with 10 transmissions per day)
Portata di trasmissione	100 m without obstacles / 35 m with obstacles
Description	Code
2-Channel pad transmitter	AT20714/2

**Centralized well locking systema functional diagram**



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