LPG STORAGE TANKS & OTHER LPG EQUIPMENT

FOR SAFE STORAGE AND DISTRIBUTION OF LPG

KADATEC

COMPANY

We started our business activity in 2006 as sales and developing company in the field of LPG, gradually growing our offer in LPG technologies. In 2011-2012 we built up a new spacious plant for manufacture of LPG storage tanks, with production capacity of 12 000 tanks per year.

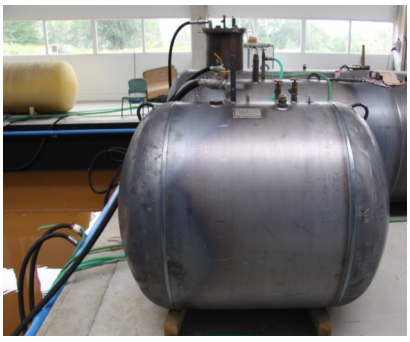
Our tanks are manufactured on new and modern machinery (welding machines from Germany, rollers from Switzerland). Thus we achieve manufacturing quality and productivity.

In addition, we offer 100% x-ray of welds by digital radiography (Kodak), which allows digital storage and evidence of radiographic images.

In order to provide complete technological solutions for use of LPG, we represent leading international manufacturers of LPG technologies (Algas-SDI, Corken, Gilbarco Veeder-Root).

We supply our tanks to customers in Western Europe (Germany, Belgium, the Netherlands), Eastern Europe (Russia, Baltic States, Ukraine) and CIS countries.

Our company currently counts 40 employees, whose number is continuously growing.



Our commitment to the quality is supported by the fact that we manufacture in a brand new plant on modern machinery, our staff is good trained and long experienced in the field of LPG. Our tanks are manufactured according to AD Merkblatt 2000 and certified according to the European Pressure Equipment Directive 2014/68/EU (modules B+D, HP 0, outside coating according to DIN 4681-3).

LPG STORAGE TANKS

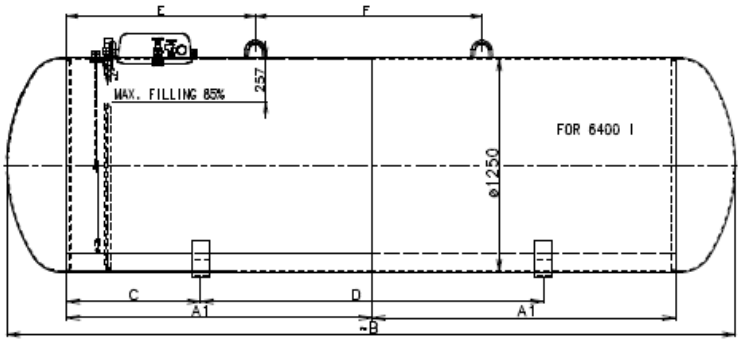
We manufacture LPG storage tanks in overground and underground versions. Our tanks meet the requirements of European Pressure Equipment Directive 2014/68/EU. The tanks are **CE 1017** marked.
Our storage tanks can be used for domestic heating purposes, for LPG automotive filling and industrial applications.
Our company has 4 special trucks for delivery of storage tanks, three of them are equipped with hydraulic manipulator. Our fleet is specially designed to have the maximum loading capacity.

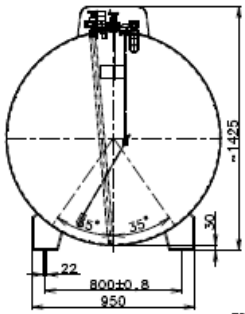
CE 1017

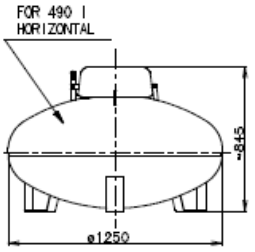
Capacities	500 - 125 000 liters
Outer diameters	Standard D 1250 / 2000 mm. Other diameters on enquiry
Operating pressure	15,6 bar (other pressures possible)
Test pressure	min. 22,3 bar
Operating temperature	Standard -20/+40˚C (other temperatures possible)
Medium	Liquefied gas DIN 51622 / EN 589
Manufacturing standard	AD-Merkblatt 2000
Regulation compliance	European Pressure Equipment Directive 2014/68/EU, modules B/G + D

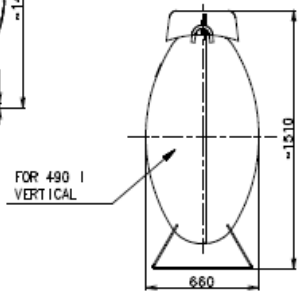
LPG STORAGE TANKS — OVERGROUND

Ø 1250mm

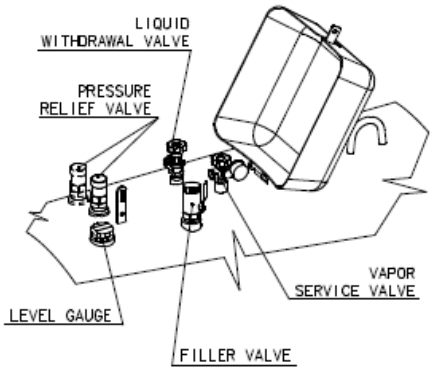








SIZE[litre]	A1 [мм]	A2 [мм]	NUMBER A	B [мм]	C [мм]	D [мм]	E [мм]	F [мм]	WEIGH (kg)
490 VERTICAL	–	–	–	~660	–	400	300	600	185
490 HORIZONTAL	–	–	–	~1250	–	120°	226,5	453	180
990	400	–	1	~1100	200	812	–130	660	270
1600	890	–	1	~1590	90	710	230	1400	370
2100	1260		1	~1960	90	1080	230	1710	423
2700	1780	–	1	~2480	90	1600	960	–	470
3600	2500	–	1	~3200	150	2200	1100	–	640
4800	1780	–	2	~4250	780	2000	1100	1320	755
6400	1780	1250	3	~5500	1060	2700	1100	2600	970
7000	1780	–	3	~6020	1310	2700	1300	2600	1120
9100	1780	–	4	~7790	545	2x2900	2050	3000	1350
10000	1780	1250	5	~8520	1130	2x2900	2350	3400	1500
11200	1780	–	5	~9560	1530	2x2900	2750	3300	1705

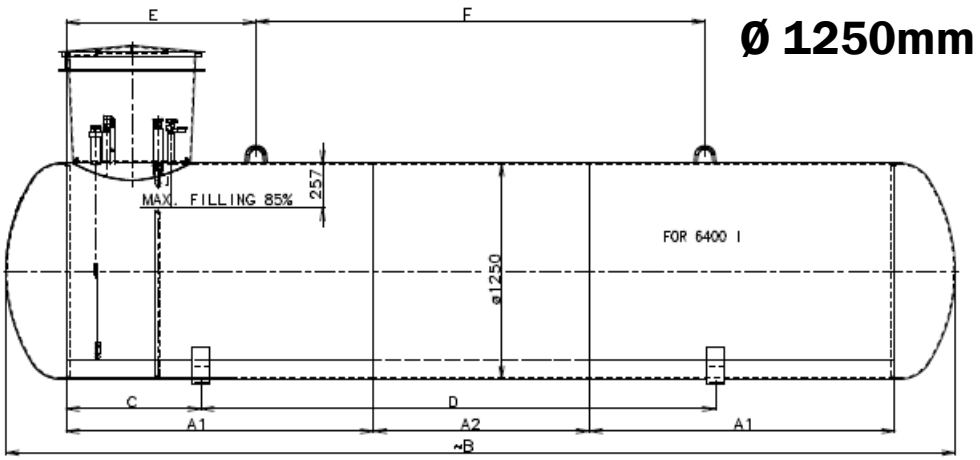


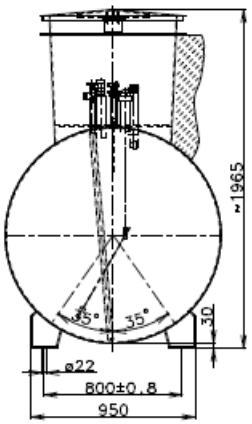
Materials	Bottom: thickness 5,7mm, S355J2+N AD/W1; P355N according to DIN 28013 Plate: thickness 5,1mm, S355J2+N AD/W1; P355N according to EN 10025
Welded joints	Evaluation AD-HP0
Surface finish	Sand blasted 3.2 and polyurethane painting ≥ 0,120mm, RAL 9010 or RAL 6019
Valves	REGO / SRG / OMECA standard pressure equipment (manual handle-off filler valve, service valve, liquid service valve, 1-2 external relief valves, float gauge)

Multivalve REGO or OMECA combines double back check filler valve, vapour equalizing valve with excess flow, pressure relief valve, service shut-off valve, Junior level gauge and pressure gauge. Additionally installed is liquid service valve.

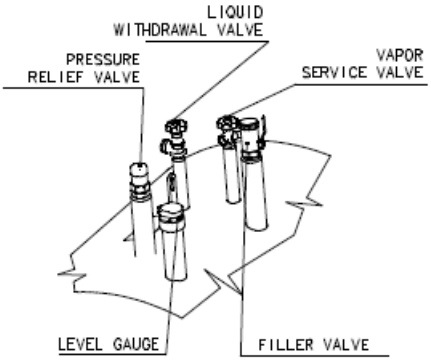
LPG STORAGE TANKS - UNDERGROUND

Ø 1250mm





SIZE[litre]	A1 [mm]	A2 [mm]	NUMBER A	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	WEIGH (kg)
2100	1260	–	1	~1960	90	1080	230	1710	433
2700	1780	–	1	~2480	90	1600	960	–	480
4800	1780	–	2	~4250	780	2000	1100	1320	765
6400	1780	1250	3	~5500	1060	2700	1100	2600	980
7000	1780	–	3	~6020	1310	2700	1300	2600	1130
9100	1780	–	4	~7790	545	2x2900	2050	3000	1360
10000	1780	1250	5	~8520	1130	2x2900	2200	3400	1510
11200	1780	–	5	~9560	1530	2x2900	2750	3300	1715



Materials	Bottom: thickness 5,7mm, S355J2+N AD/W1; P355N according to DIN 28013 Plate: thickness 5,1mm, S355J2+N AD/W1; P355N according to EN 10025
Welded joints	Evaluation AD-HP0
Surface finish	Sand blasted 3.2 and epoxy anticorrosive coating 1000µm, according to DIN 4681/3, ISO test 25kV
Fittings	REGO / SRG / OMECA standard pressure equipment, adjustable stainless steel hood Ø800mm, H550-650mm

We offer underground tanks with adjustable plastic-stainless steel or all-stainless steel hood Ø800mm. The hoods are adjustable in height H550-650mm, which is perfect for uneven terrain, and are lockable at 110°.

AUTOGAS COMPACT FILLING UNIT — OVERVIEW

We offer 3 versions of autogas compact filling unit:

* with submersible pump Red Jacket in shaft
* with submersible pump Red Jacket without shaft
* with external pump Corken and Siemens motor

All versions are possible in overground or underground execution. Standardly we offer units of D1250mm, further D1600mm and D2000mm on customer request.

The units are equipped with:

* KADATEC dispenser—stainless steel execution, very accurate measurement (0,2%) on principle of the mass flow meter, remote data monitoring, or
* Dispenser of any manufacturer, classic volume measurement.

The unit complies with European requirements: PED (modules B/G + D), ATEX.

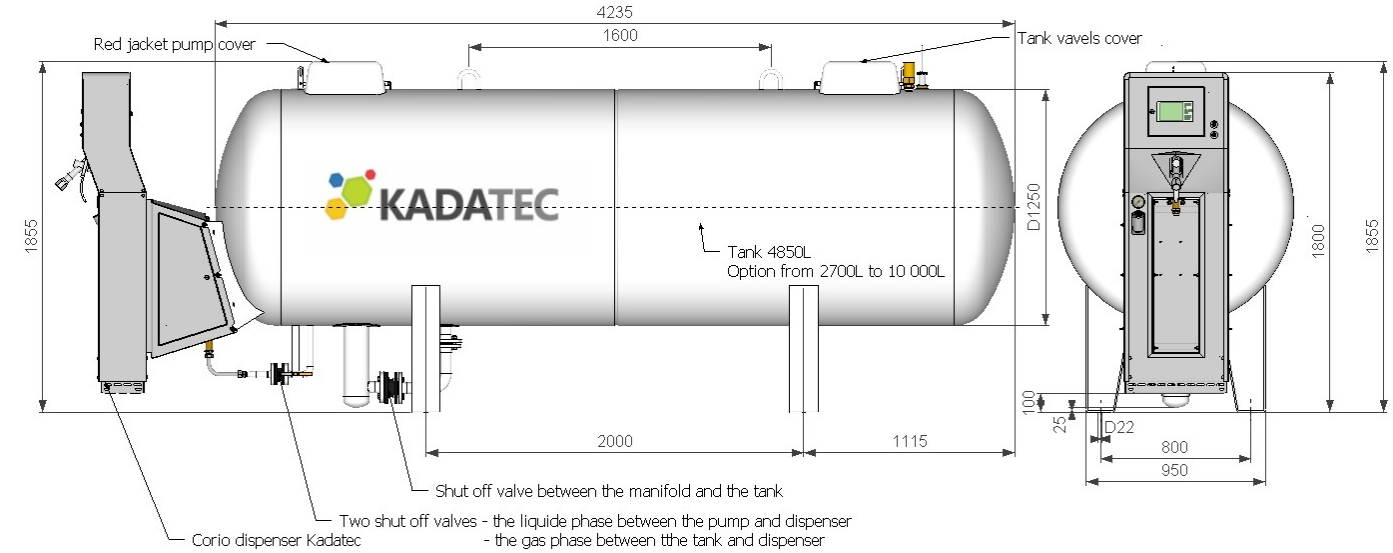
Implementation of compact filling units is an ideal solution to complement the fuel station with LPG fueling technology.

UNITS ARE DELIVERED FULLY ASSEMBLED.

Pump protection *Differpress 14* protects the Red Jacket pump against the dry running, continuously measures and displays the pressure in the pipeline behind the pump.

Volume tank D1250mm	4 850 l	7 000 l	10 000 l
Max. filling capacity	2 145 kg	2 975 kg	4 420 kg
Max. working pressure		1,56 MPa	
Max. differential pressure		0,92 MPa	
Max. flow		50 l/min	
Dispensing accuracy		±0,2 %	
Operating temperature		Standard -20/+40 °C or -40/+40°C	
Electrical connection		3x230/400V AC±15%, 50 Hz / 2,2 kW	
Approvals		EC certificates FTZU 12 ATEX 0080X (Ex II 2G IIA T3) and TCM 141/13-5084	

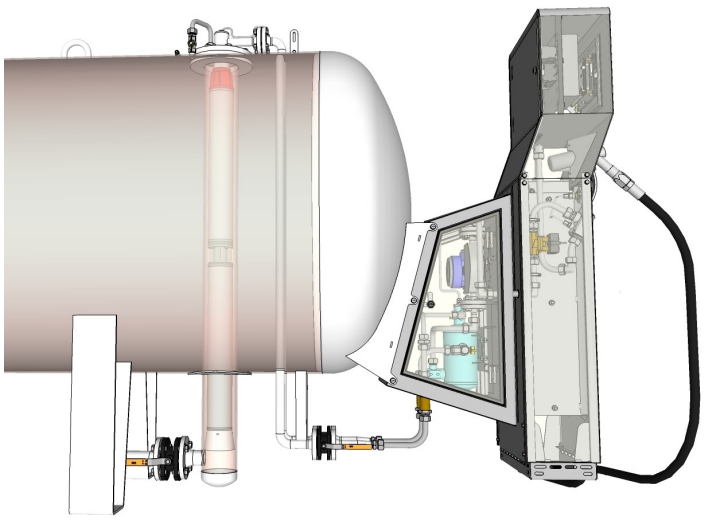
AUTOGAS FILLING UNIT WITH RED JACKET PUMP IN SHAFT



Autogas compact filling unit is an elegant and cost-effective solution, where dispenser and pump are directly mounted on the tank, without supporting frame.

Submersible pump Red Jacket is placed in a protective shaft directly in the tank.

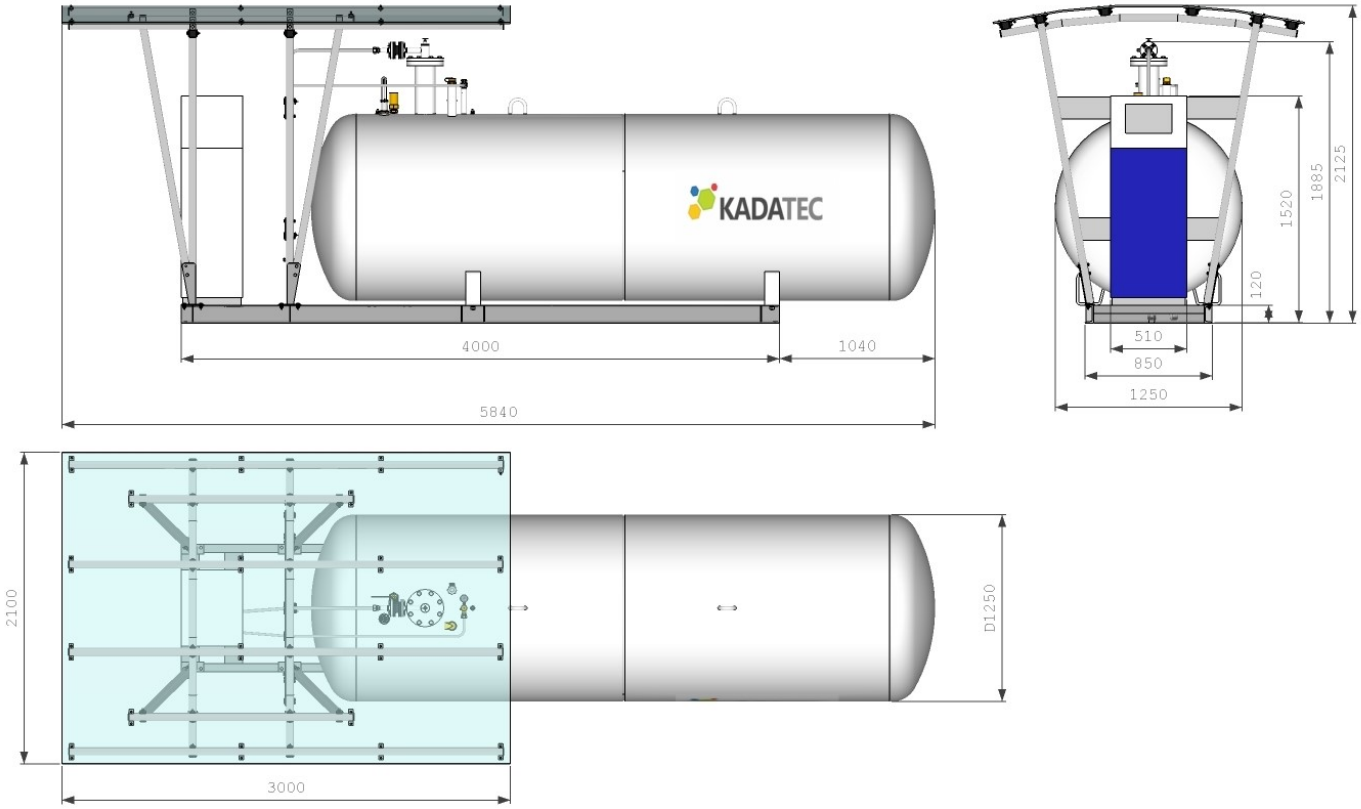
+ With KADATEC dispenser the measurement is performed through mass flow meter with its own temperature compensation, measurement accuracy of 0,2% and accurate information about density and composition of gas.
+ Pump servicing is done without empting the tank: in the shaft the ball valve is closed and the pump can be replaced safely.
+ Pump protection *Differpress 14* protects the Red Jacket pump against the dry running, continuously measures and displays the pressure in the pipeline behind the pump.
+ KADATEC dispenser *Corio* is specially designed for autogas filling units.



Components:

* Storage tank in overground or underground execution, D1250mm (alternative: D1600mm / D2000mm)
* Red Jacket submersible pump type *Premier LPG300V17-21*, placed in a shaft, with inner bypass, with pump protection *Differpress 14*
* LPG dispenser KADATEC *Corio* or *Corio duo*, with a Coriolis mass flow meter *LPGmass* (dispensing accuracy ±0.2%). As alternative we offer dispensers of any other manufacturer– it requires frame mounting.
* LPG monitoring system, informing about gas level in the tank.
* Piping, polycarbonate shelter (in case of frame mounting).

AUTOGAS FILLING UNIT WITH RED JACKET WITHOUT SHAFT



Autogas filling unit with submersible pump Red Jacket without shaft, with dispenser of any manufacturer, is the cheapest option of the unit. The pump is placed directly in the tank, and for the pump servicing the tank must be emptied.

Components:

* Storage tank in overground or underground execution, D1250mm (alternative: D1600mm / D2000mm)
* Red Jacket submersible pump type *Premier LPG300V17-21*, placed in a shaft, with inner bypass, with pump protection *Differpress 14*
* LPG dispenser KADATEC *Corio* or *Corio duo*, with a Coriolis mass flow meter *LPGmass* (dispensing accuracy ±0.2%) or one-hose dispenser of any other manufacturer –it requires frame mounting.
* Piping, polycarbonate shelter (in case of frame mounting).

LPG DISPENSER CORIO / CORIO DUO

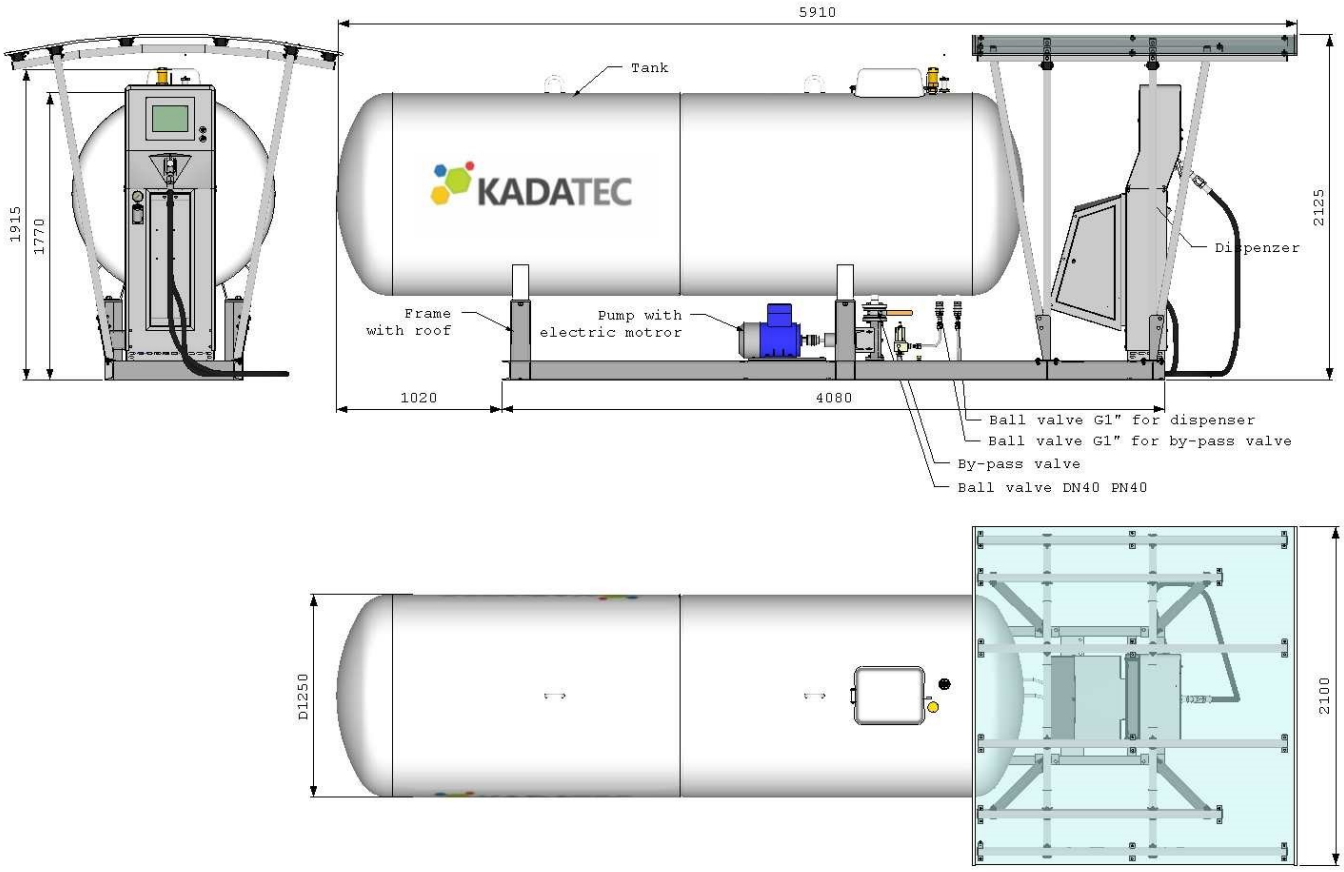
Specially developed design for use on autogas filling units. The key element of the dispenser is a mass flow meter with its own temperature compensation, which exactly measures dispensed amount on the principle of Coriolis force. Data from the flow meter is then processed by measuring unit, which transmits it to the fuel station terminal.

The dispenser is certified according to the European Directive 2004/22/EC and ATEX Directive 94/9/EC.

Standard functions of dispenser *Corio / Corio duo*:

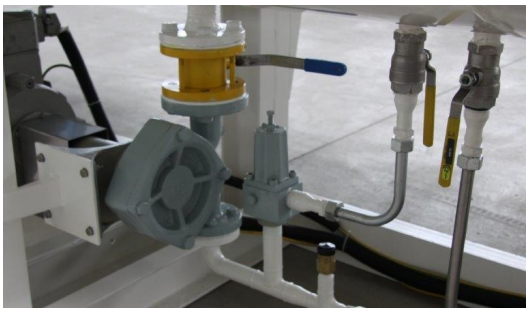
* Volume or Price - electronic setting
* ATC - automatic temperature compensation.
* Auto stop at 100% - automatic dispensing stop by full car tank.
* Monitoring system – continuous electronic monitoring of the situation with an acoustic / visual warning.
* Possibility of self-service via GSM mobile operator (payment via mobile phone, NTF technology).

AUTOGAS FILLING UNIT ON FRAME WITH CORKEN PUMP



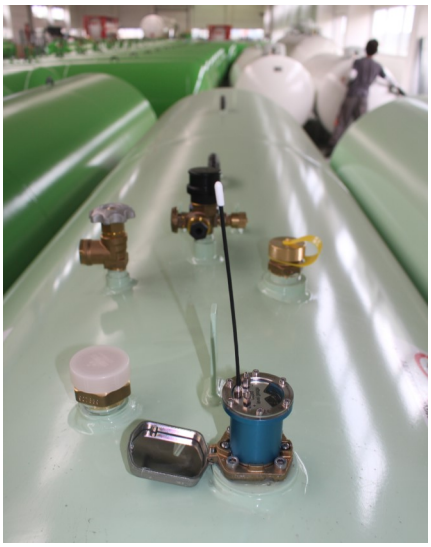
Components:

* Storage tank in overground or underground execution, D1250mm (alternative: D1600mm / D2000mm);
* External pump Corken FD075 or FD150, with bypass;
* LPG dispenser KADATEC *Corio* or *Corio duo*, with a Coriolis mass flow meter *LPGmass* (dispensing accuracy ±0.2%) or one-hose dispenser of any other manufacturer –it requires frame mounting.
* Explosion-proof three-phase asynchronous low-voltage motor Siemens series AOM, 3/4kW or 5,5kW, ex proof design ExdIIB+H2T4Gb;
* Frame, piping, polycarbonate shelter.

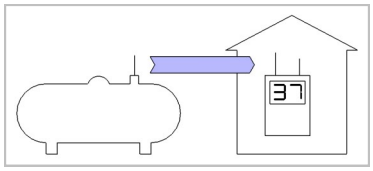


MONITORING SYSTEM FOR LPG STORAGE TANKS

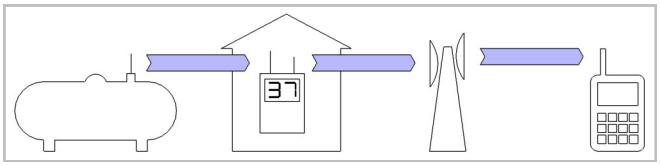
The monitoring system is designed for remote monitoring of gas level in LPG tank. Information is transmitted by means of radio data from the tank to a remote place.



Transmitter environment	Ex-zone
Receiver environment	usual
Transmission frequency	433 MHz
Transmitter power supply	Internal lithium battery (min. 5 years of operation)
Receiver power supply	AC adapter
Basic range	100 meters (may be extended)
Sending of information	every 1 min.
Certificates	CE, ATEX <Ex> II 2G Ex ia IIA T4 Gb



⇒ **BASIC VERSION:** transmission of information about the amount of gas. Information displayed it on the LCD of the receiver as % value of the tank volume.



⇒ **GSM VERSION:** the receiver additionally has an implemented GSM modem, which allows the user to check the gas level with his mobile phone.

To manage multiple tanks and large systems there is a special software available.

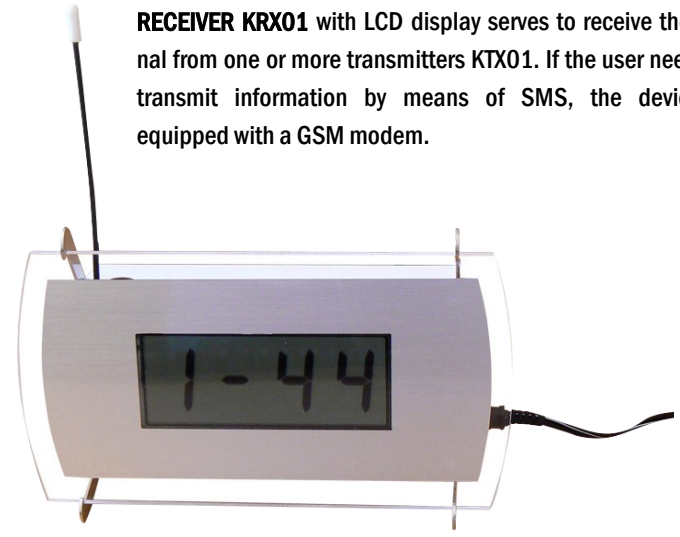
SENDER KTX01 performs digital reading from the level gauge. It is compatible with all types of level gauges. Measurement accuracy is the same as by the mechanic indicator installed on the tank. Sender ensures following functions:

* Indication of the gas level in the tank and radio data transmission
* Monitoring of cathodic protection
* Measurement of ambient temperature and internal battery
* Energy generation from an outside source 1.2 V (cath. protection, solar cell, battery)

\+ Robust waterproof construction

\+ Ultra-low power consumption

RECEIVER KRX01 with LCD display serves to receive the signal from one or more transmitters KTX01. If the user needs to transmit information by means of SMS, the device is equipped with a GSM modem.



TRANSMITTER-RECEIVER KRT01 is used to extend the range or to transmit data under difficult conditions. The device does not require any operating or maintenance. The device is powered by solar cell.

CATHODIC PROTECTION FOR LPG UNDERGROUND TANKS

Active cathodic anticorrosive protection serves to guarantee functional safety and extension of lifetime of steel equipment stored in water or in earth. It is especially suitable for underground LPG storage tanks.

Cathodic protection set includes:

* Galvanic anode (2,0 kg or 4,0 kg net) of magnesium alloy pre-packaged in cotton bag, filled with backfill. Amount of anodes depending on size of steel construction (S1, S2 or S4).
* Connecting box, which connects galvanic anodes with protected construction and which further enables to conduct check measurements.
* Connecting cable (length ca. 6m) links connecting box with protected construction.

Code	Set	Recommended usage
S1	1x anode 2,0kg, 1x 6m cable, connecting box	LPG tank <2700l
S1-0	1x anode 2,0kg, 1x 6m cable	LPG tank <2700l
S2	2x anode 2,0kg, 2x 6m cable, connecting box	LPG tank 2700l - 4800l
S4	4x anode 2,0kg, 4x 6m cable, connecting box	LPG tank >4800l

LARGE STORAGE TANKS UP TO 125M³

Capacities	up to 125 000 liters
Outer diameters	2500 / 2800 mm
Operating pressure	15,6 bar (other pressures possible)
Test pressure	min. 22,3 bar
Operating temperature	-20/+40˚C or -40/+40˚C (other temperatures possible)
Medium	Liquefied gas DIN 51622 / EN 589
Manufacturing standard	AD-Merkblatt 2000
Regulation compliance	European Pressure Equipment Directive 2014/68/EU, modules G + D

KADATEC s.r.o.
Industrial zone
257 64 Zdislavice
Czech Republic
Phone: +420 317 705 090
Fax: +420 317 705 071
Mobile: +420 724 850 696
Mailto: kadatec@kadatec.cz

www.kadatec.cz

KADATEC