

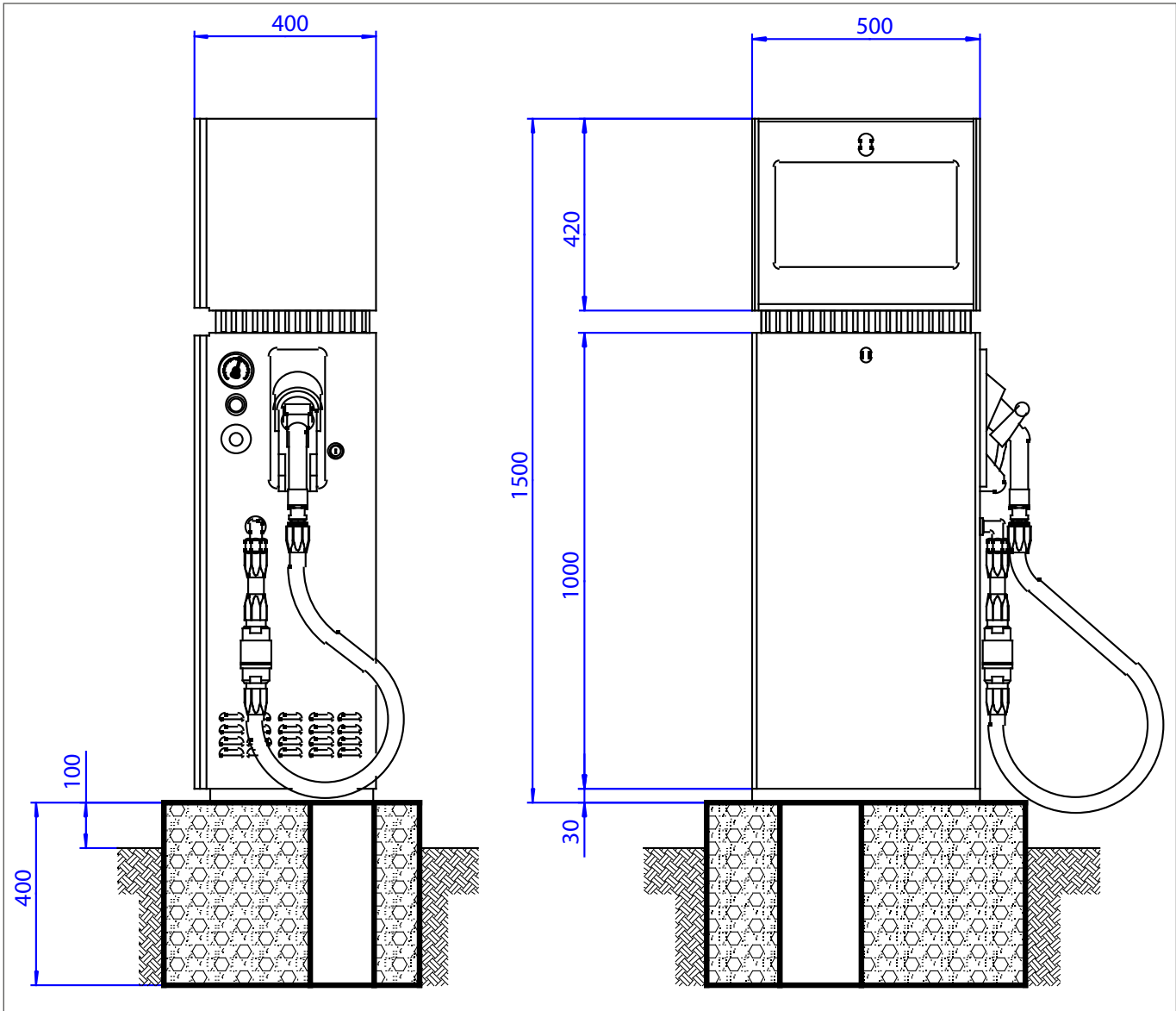
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Dispensers LPG • Refueling stations LPG

FAS 35 4733 electronic LPG dispenser type FAS-120

Operation pressure, bar	up to 25
Flow capacity, l/min	
min.	5
max.	50
Weight, kg	110
Dimensions, mm:	
Height (entire dispenser)	1500
Height (mechanical part)	1000
Width	500
Depth	400
Power supply	230 V AC, 50 Hz
Counter-Display (kg)/LCD-Display	1 (inside)/1
Hydraulic	PN 25
Coriolis flow meter	5-50 l/min
Equipment: vapor eliminator with fine mesh filter, differential pressure valve, back check pressure valve, safety relief valves, expansion vessel, high pressure hose LPG 19 (length 5 m) with excess flow valve and breakaway coupling	
Connection: liquid phase / gas return line	Ball valve ¾ G IG / Ball valve ¾ G IG
Information data at LCD-Display "price per liter", "filling volume liter", "total sum"	
Protocols: Easy Call, DART, Pumalan, Nara	
Information data at internal counter-display: volume, kg, density and temperature data of LPG	
Additional equipment (against extra cost): solenoid valve (single- or double-acting), heating for electronic part, insulating flange set for underground pipe lines	





Dimensional drawing of LPG-dispenser type FAS-120

**FAS 35 4732 electronic LPG dispenser type FAS-220 HM
BC (one hose)**
**FAS 35 4731 electronic LPG-dispenser type FAS-230 HM
BC (two hoses)**

Operation pressure, bar	up to 25
Flow capacity, l/min	
min.	5
max.	50
Weight FAS-220/FAS-230, kg	190/220
Dimensions, mm:	
Height (entire dispenser)	2109
Width	1200
Depth	520
Power supply	230 V AC, 50 Hz
Housing execution	High Mast (HM), from stainless steel

Dispensers FAS-230 differ from dispensers FAS-220 in their construction in so far that all components required for delivery of product are doubled.

Counter-Display (kg)/ LCD-Display	1 (inside)/1 (FAS-220 HM) 2 (inside)/2 (FAS-230 HM)
Hydraulic	PN 25
Coriolis flow meter (0...50 l/min)	1 (FAS-220 HM)/1 (FAS-220 HM)

Equipment: vapor eliminator with fine mesh filter, differential pressure valve, back check pressure valve, safety relief valves, expansion vessel, high pressure hose LPG 19 (length 5 m) with excess flow valve and breakaway coupling

Connection: liquid phase / gas return line	Ball valve ¾" G IG / Ball valve ¾" G IG
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Information data at LCD-display "price per liter", "filling volume liter", "total sum"

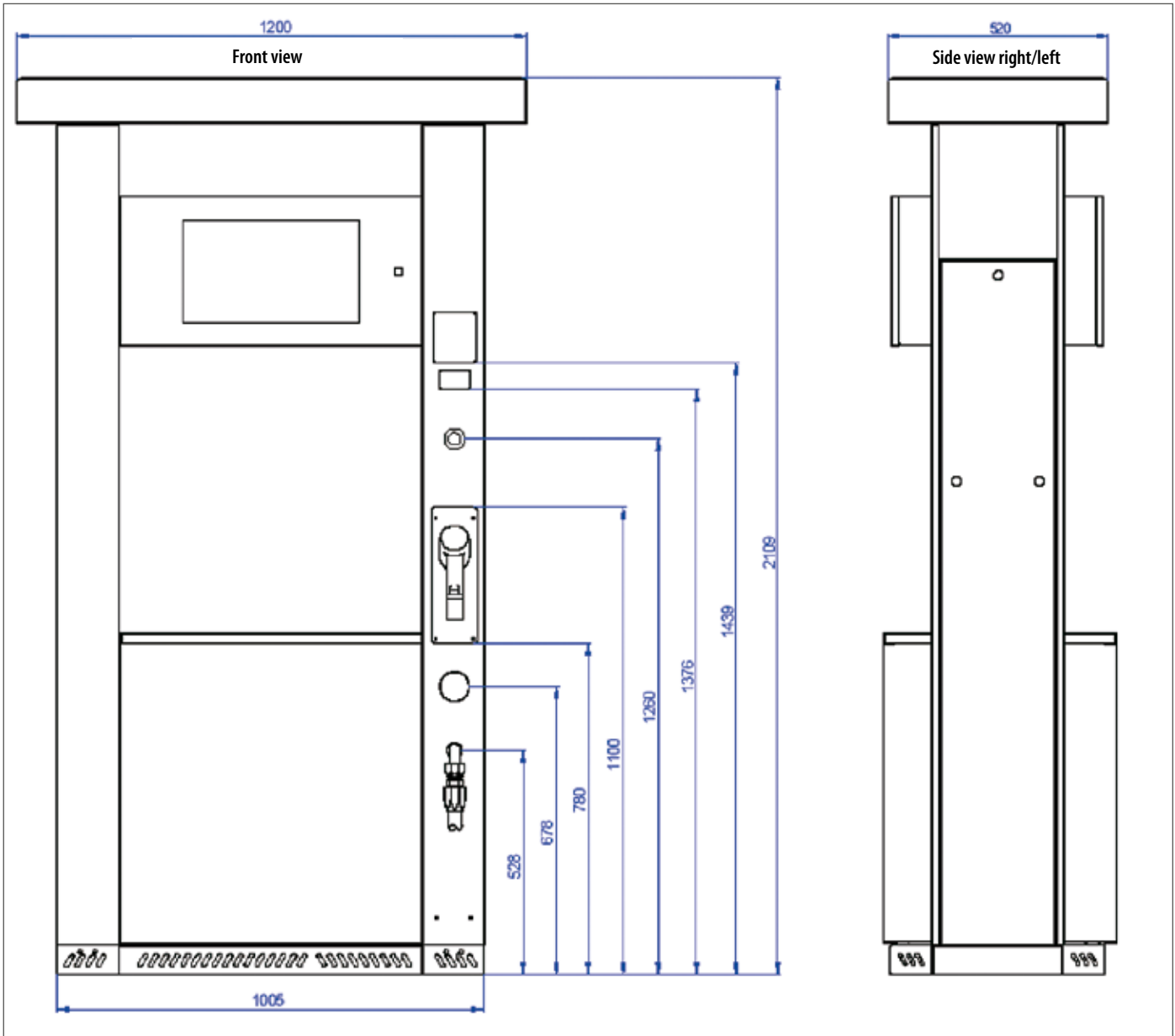
Information data at internal counter-display: volume, kg, density and temperature data of LPG

Protocols: Easy Call, DART, Pumalan, Nara

Additional equipment (against extra cost): solenoid valve (single- or double-acting), heating for electronic part, insulating flange set for underground pipe lines



LPG



Dimensional drawing of electronic LPG-dispenser
 Type FAS-220 HM/FAS-230 HM

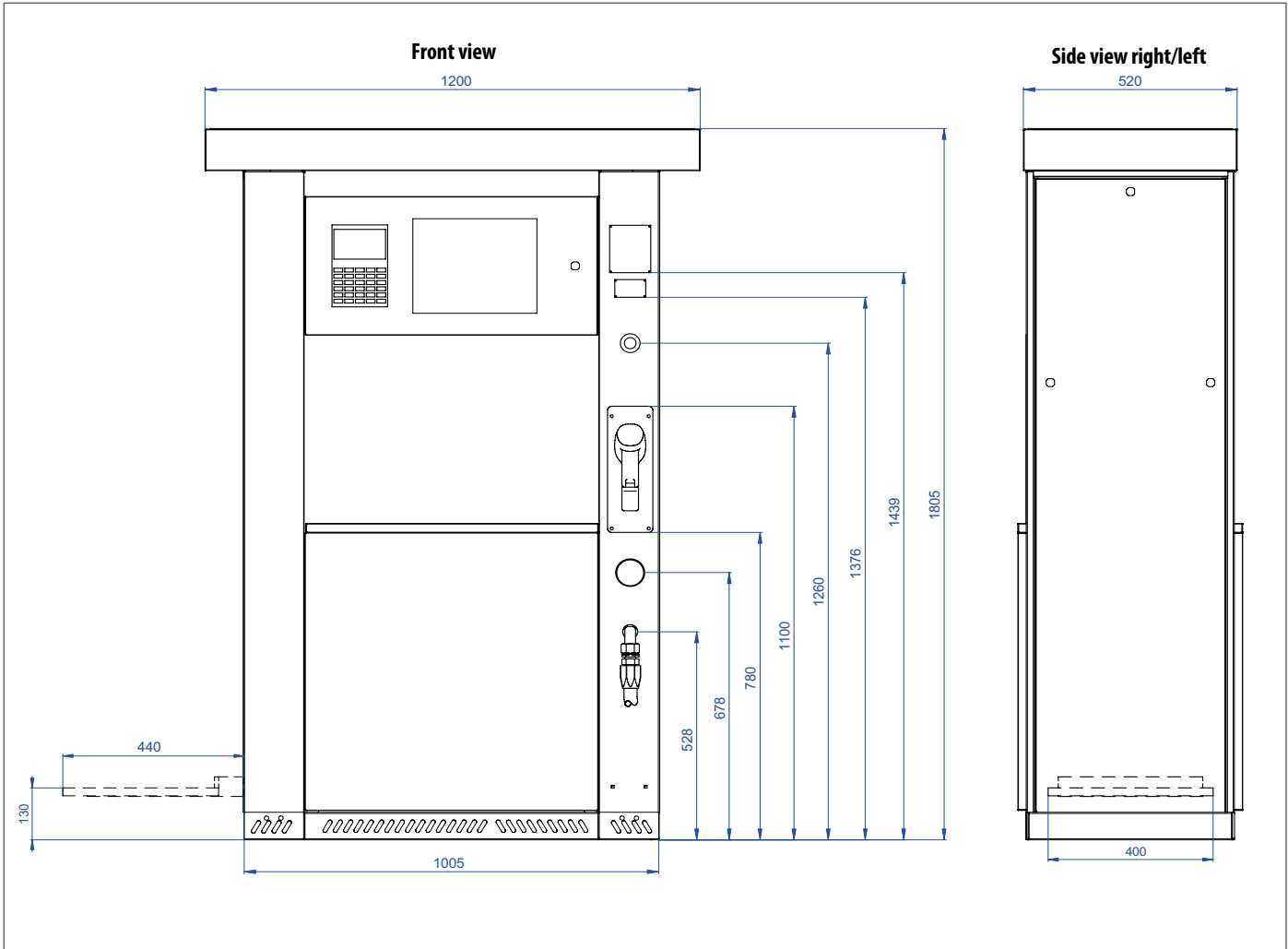
**FAS 35 4752 combined electronic LPG dispenser type
FAS-220 WM BC**

Operation pressure, bar	up to 25
Flow capacity, l/min	
min.	5
max.	50
Weight, kg	270
Dimensions, mm:	
Height (entire dispenser)	2450
Height (mechanical part)	718
Width	500
Depth	760
Power supply	230 V AC, 50 Hz

With filling device for filling of 27- and 50-liter gas cylinders and a filling unit for filling of cars.

Counter-Display (kg)/LCD-Display	1 (inside)/1 (FAS-220) 2 (inside)/2 (FAS-230)
Hydraulic	PN 25
Equipment: vapor eliminator with fine mesh filter, differential pressure valve, back check pressure valve, safety relief valves, expansion vessel, high pressure hose LPG 19 (length 5 m) with excess flow valve and breakaway coupling	
Connection: liquid phase / gas return line	Ball valve 3/4" G IG / Ball valve 3/4" G IG
Information data at LCD-Display "price per liter", "filling volume liter", "total sum", "tare", "filling weight, kg", "total weight, kg"	
Protocols: Easy Call, DART, Pumalan, Nara	
Information data at internal counter-display: volume, kg, density and temperature data of LPG	
Additional equipment (against extra cost): solenoid valve (single- or double-acting), heating for electronic part, insulating flange set for underground pipe lines	





Dimensional drawing of electronic LPG-dispenser type FAS-220 WM with filling device

FAS 93 6931 electronic LPG dispenser type FAS ZS-120 (Economy line)

Operation pressure, bar	up to 25
Flow capacity, l/min	
min.	5
max.	50
Weight, kg	90
Dimensions, mm:	
Height (entire dispenser)	1500
Height (mechanical part)	1000
Width	500
Depth	400
Power supply	230 V AC, 50 Hz

Counter-Display (kg)/ LCD-Display	1 (inside)/1
Hydraulic	PN 25
Coriolis flow meter	5-50 l/min
Equipment: vapor eliminator with fine mesh filter, differential pressure valve, back check pressure valve, safety relief valves, expansion vessel, high pressure hose LPG 19 (length 5 m) with excess flow valve and breakaway coupling	
Connection: liquid phase / gas return line	Ball valve 1" female NPT/ Ball valve ¾" female NPT

Information data at LCD-Display: "price per liter", "filling volume liter", "total sum"

Information data at internal counter-display: volume, kg, density and temperature data of LPG

Additional equipment (against extra cost): solenoid valve (single- or double-acting), heating for electronic part, insulating flange set for underground pipe lines


**FAS 93 6938 Electronic LPG dispenser type FAS ZS-230 (Economy line)
displays + hoses at the front**
**FAS 93 6936 Electronic LPG dispenser type FAS ZS-230 (Economy line)
displays + hoses oppositely**

Operation pressure, bar	up to 25
Flow capacity, l/min	
min.	5
max.	50
Weight, kg	148
Dimensions, mm:	
Height (entire dispenser)	1500
Height (mechanical part)	1000
Width	850
Depth	400
Power supply	230 V AC, 50 Hz

Counter-Display (kg)/LCD-Display	2 (inside)/2
Hydraulic	PN 25
Coriolis flow meter	5-50 l/min
Equipment: vapor eliminator with fine mesh filter, differential pressure valve, back check pressure valve, safety relief valves, expansion vessel, high pressure hose LPG 19 (length 5 m) with excess flow valve and breakaway coupling	
Connection: liquid phase / gas return line	Ball valve 1" female NPT/ Ball valve ¾" female NPT

Information data at LCD-Display: "price per liter", "filling volume liter", "total sum"

Information data at internal counter-display: volume, kg, density and temperature data of LPG

Additional equipment (against extra cost): solenoid valve (single- or double-acting), heating for electronic part, insulating flange set for underground pipe lines



FAS 93 583 Service kit in a tool bag for service technicians

Service kit in a tool bag with calibrated flow turbine and set of adaptors for connection to internal filling valve. For control measuring of LPG Dispenser Type FAS-120/220/230 after.

Consists of:

- Tool bag
- Measuring turbine, max. flow capacity 50 l/min, with 1 3/4" ACME connections
- 1×FAS 22344 rotary switch attachment
- 1×Adapter FAS 13532, T3 / W 21,8×1/4" male
- 1×Adapter FAS 13518, 1 3/4" ACME coupling / Bajonett
- 1×Adapter FAS 13509, 1 3/4" ACME coupling / T3
- 1×Adapter FAS 10065, 1 3/4" ACME male / W 21,8×1/4" male
- Protective glove

Conversion kit for modification of a LPG-dispenser type FAS of early versions

The conversion kit makes it possible to modify quickly an early version of LPG-dispenser with piston meter. Consisting of:

- 2 pcs. of Coriolis mass meter, cable, LCD-display and 2 pcs. differential pressure valves
- Installation material
- Manual



Order No.	Description
93 602	Conversion kit for modification of dispenser FAS-230 with one 4-piston meter, year of manufacture from 2007
93 6020	Conversion kit for modification of dispenser FAS-230 with one 2 or 4-piston meter, year of manufacture before 2004
93 6021	Conversion kit for modification of dispenser FAS-120 with one 2-piston meter
93 6026	Conversion kit for modification of dispensers FAS-120/220 with one piston meter in a dispenser with a mass meter
93 6030	Conversion kit for modification of dispenser FAS-230 with two-piston meter in a dispenser with a mass meter



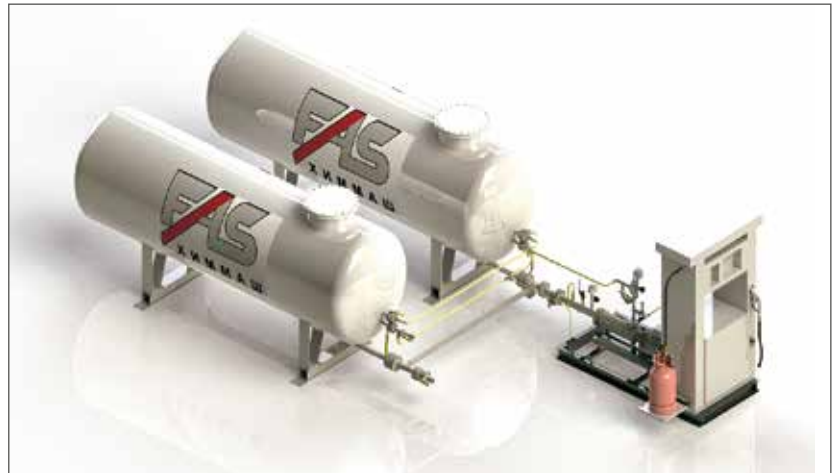
Complete LPG filling unit type FAS with above-ground tanks

LPG filling station of filling of cars with LPG

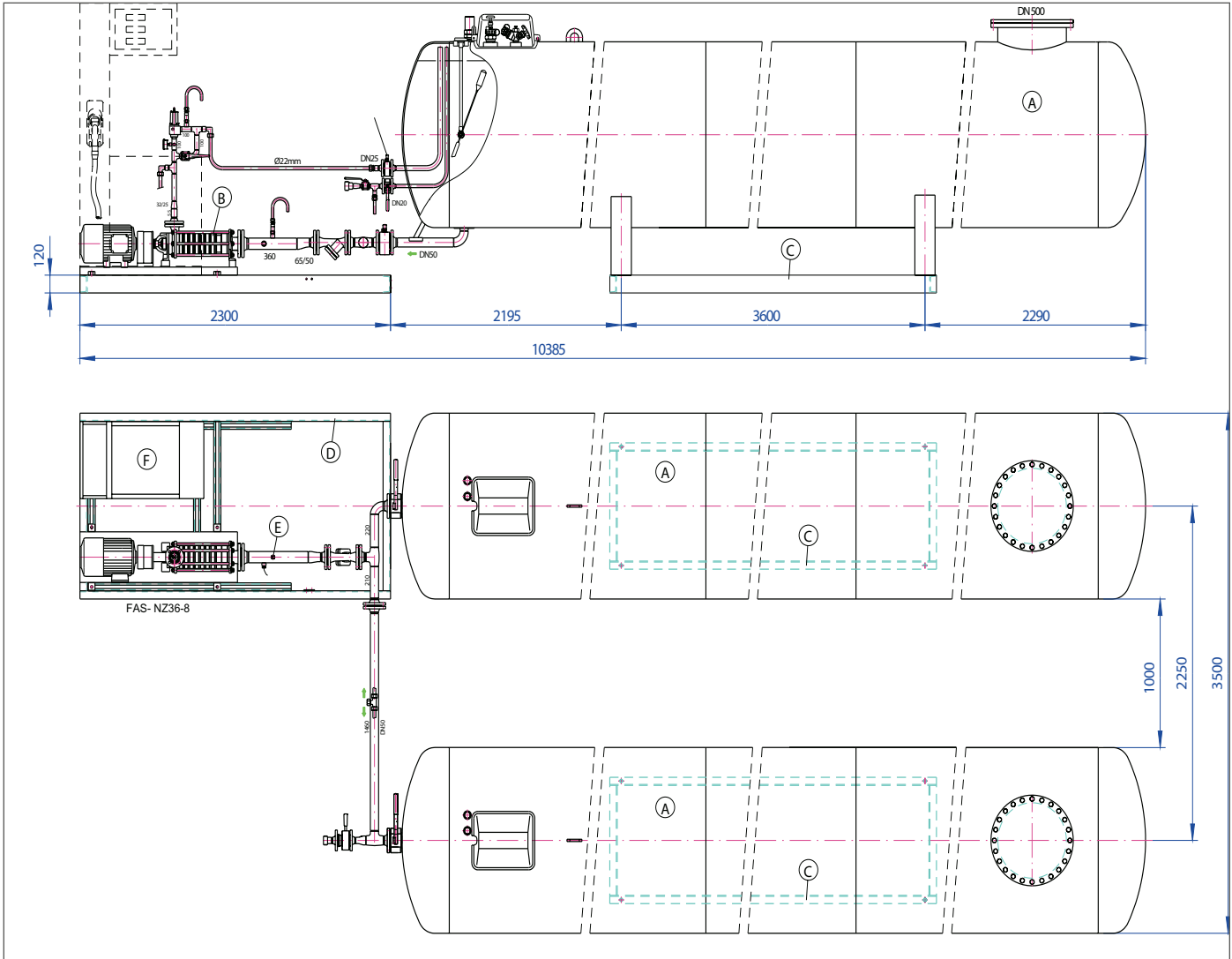
- above ground storage tanks, mounted on a steel base frame, with LPG-Dispenser, pump unit for the removal of liquid phase from the tank, incl. all the necessary safety- and shut-off fittings, strainer, bypass valve and all necessary pipe lines
- the construction on a common frame reduces the installation and remanufacturing costs, speeds mounting and commissioning, retaining system stability.

Main components:

- 1-3 above ground storage tanks for LPG (4,85/6,7/9,0 m³)
- 1-3 pump units type FAS-NZ with flow rate of 50 up to 130 l/min
- 1-4 LPG-dispenser type FAS, with one or two filling nozzles, capacity – up to 50 l/min
- complete measuring, shut-off and safety fittings
- optional: an additional pump unit for filling and emptying of storage tanks, capacity 220 l/min



REMARK: execution and installation versions will be processed accordingly to county-specific regulations and standards as well as to specific customer requirements and can be combined in modular construction system as necessary.



Dimensional drawing of complete LPG filling station with two over-ground storage tanks and LPG-dispenser type FAS-220

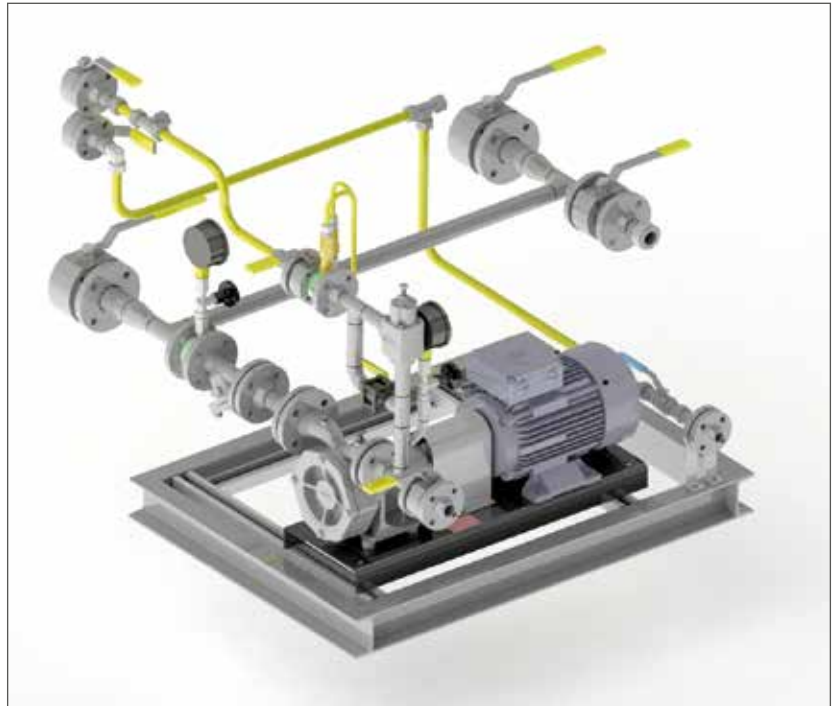
FAS 93 3093 complete FAS “ready to use” pump units
 for LPG car refueling station, prepared for installation of LPG dispenser and 1, 2 or 3 pcs of LPG tanks

Consisting of:

- FD-150 pump unit with mechanical seal, capacity up to 100 l/min, Ex-motor 4,6 kW, 400/690 V, 50 Hz
- supply line with ball valve DN 32 and fine filter DN 32
- discharge line with ball valve DN 25 with mounting flange
- bypass line with bypass valve and ball valve with mounting flange
- all necessary additional equipment for safety operation
- connections for road tanker

All equipment is painted. Mounted on a common galvanized frame. The frame is prepared for mounting of all types of FAS dispensers.

“Ready to use unit” with FD-150, prepared for connections with two LPG tanks

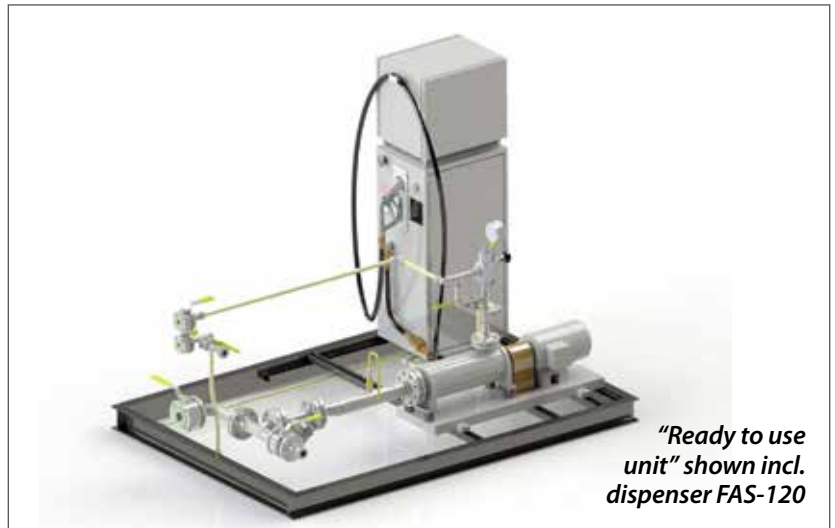


FAS 93 3092 complete FAS “ready to use” pump units
 for LPG car refueling station, prepared for installation of LPG dispenser and 1, 2 or 3 pcs of LPG tanks

Consisting of:

- side channel pump unit with mechanical seal, capacity of 100 l/min, Ex-motor 5 kW, 400/690 V, 50 Hz,
- supply line with a ball valve DN 32 and with a fine filter DN 32
- discharge line with a ball valve DN 25 with mounting flange
- bypass line with bypass valve and ball valve with mounting flange
- all necessary additional equipment for safety operation
- connections for road tanker

All equipment is painted. Mounted on a common galvanized frame. The frame is prepared for mounting of all types of FAS dispensers.



“Ready to use unit” shown incl. dispenser FAS-120



Complete LPG-filling station type FAS with underground storage tanks of 4 850 up to 20 000 l

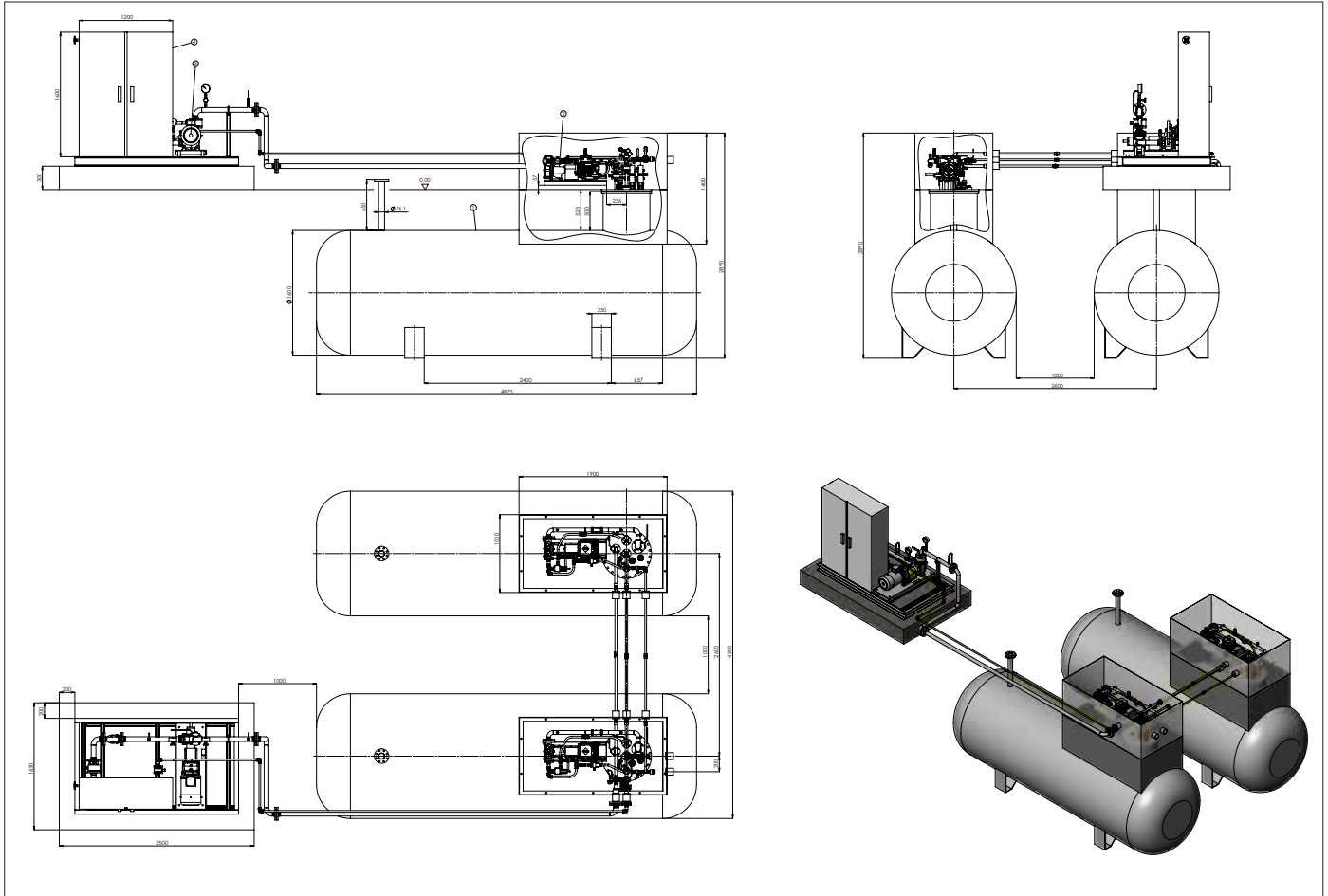
LPG-Filling Station for filling of cars with LPG:

- Underground storage tanks
- Common steel base frame, with LPG-Dispenser, pump unit for the removal of liquid phase from the tank, incl. all the necessary safety- and shut-off fittings, strainer, by-pass valve and all necessary pipe lines
- The construction on a common frame reduces the installation and remanufacturing costs, speeds mounting and commissioning, retaining system stability.

Main components:

- 1-3 underground storage tanks for LPG (4,85/6,7/9,0/20,0 m³)
- Complete self-priming pump facility with pump unit type FAS-AP, capacity 50/100 l/min
- By-pass line
- Pipe lines for filling of cars, filling and emptying of storage tanks, also by emergency emptying
- Dry running protection – flow detector dip sensor
- Insulating flanges for underground pipe lines
- 1-4 LPG-dispenser type FAS, with one or two filling nozzles, capacity – up to 50 l/min
- Complete measuring, shut-off and safety fittings

REMARK: execution and installation versions will be processed accordingly to country-specific regulations and standards as well as to specific customer requirements and can be combined in modular construction system if necessary.



**Complete compact LPG-filling station type FAS
 with one underground storage tank**



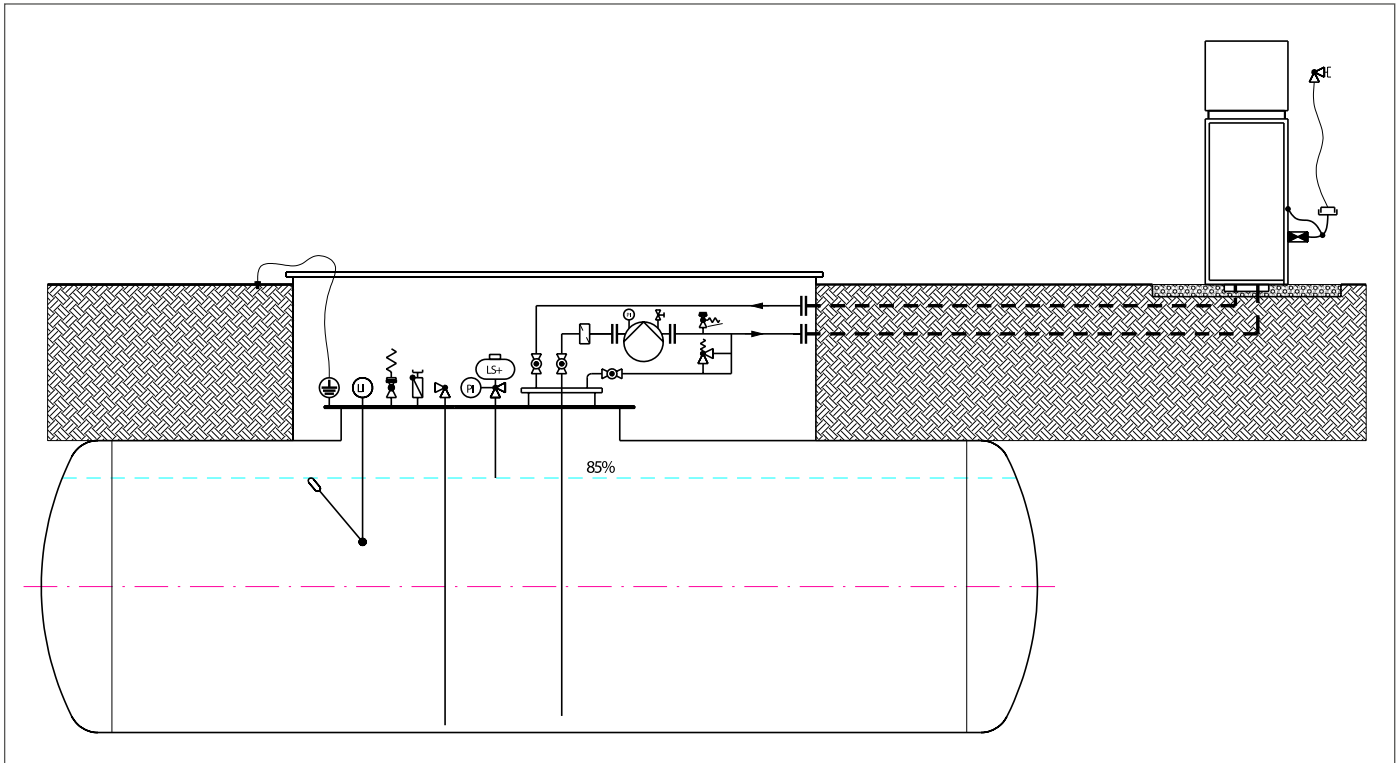
REMARK: the execution of this compact station is possible with LPG-dispenser type FAS-220 WM

Neither long construction no mounting works are required. Only a spoil for storage tank and a trench for power supply as well as data cables are needed.

Pump unit is equipped with pump FD-150, flow capacity 90 l/min at differential pressure of up to 10,5 bar and electrical motor with motor capacity 4,1 kW in Ex-execution.

- Capacity of filling station is up to 20 cars per hour
- Completely pre-assembled and tested
- Quick installation and comissioning





Hydraulic schema of compact filling unit with underground storage tank and pump unit FD-150. LPG-dispenser – FAS-120.

