



EMUPSS (DOMS EMULATOR)

User guide
2025

Introduction

EmuPSS is a software emulator that enables a computer to function as a real DOMS PSS 5000 device using the same IP address as the computer running EmuPSS.

It is recognized as a DOMS by the official Demo POS application and supports nearly all functionalities featured in that demo.

With EmuPSS, you can define your grades, fuel dispensers, wash points, tanks, price poles, and electronic payment terminals. The operations of these elements can also be simulated by EmuPSS.

This allows you to easily test different forecourt configurations from a single Windows application.

The default configuration of the forecourt includes four fueling points, three tanks, one EPT, a wash point, and a price pole.

Forecourt Configuration

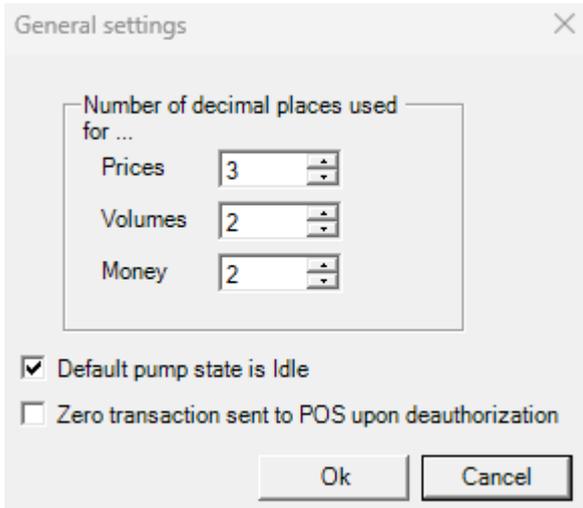
EmuPSS stores all configuration data in a single file with the ".emupss" extension. To start EmuPSS with a specific configuration, simply double-click the corresponding file.

In the main menu, you have the option to save the current configuration as a new file, allowing you to create a backup. There are also dialogs available for you to customize the setup according to your preferences.

Each time you start the application, it will attempt to load the setup from the last used file. If it fails to do so, you will be prompted to either create a new configuration or load a different file. You can choose to create a new configuration that is either empty or populated with default grades and fueling points.

General Settings

These settings differ depending on the country where the software is used.



General settings

Number of decimal places used for ...

Prices	3
Volumes	2
Money	2

Default pump state is Idle

Zero transaction sent to POS upon deauthorization

Ok Cancel

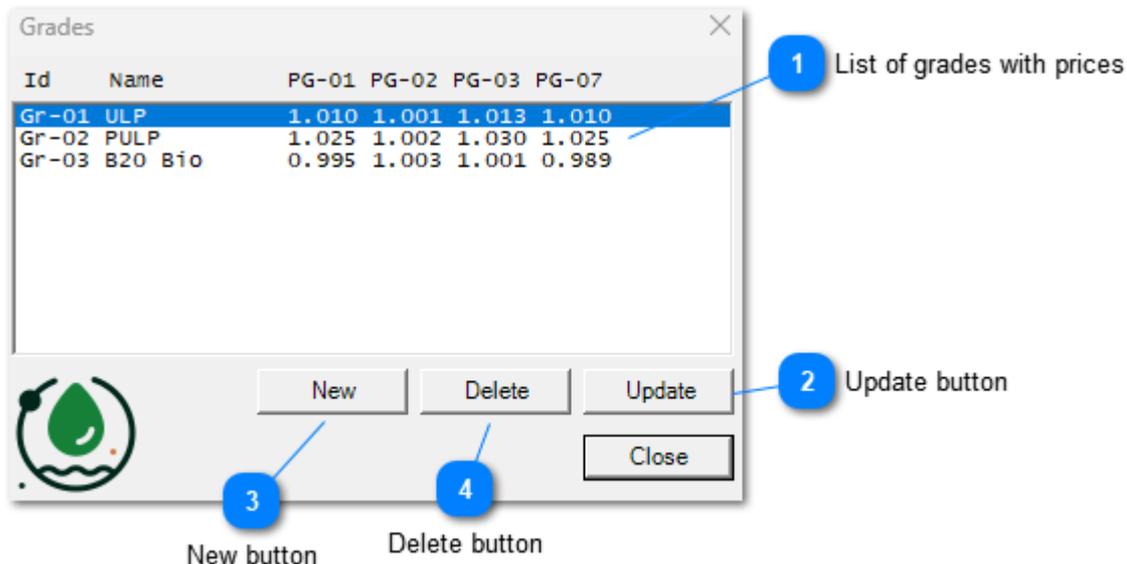
Decimal places indicate the position of the decimal point in respective values. For instance, if the decimal places are set to 0, no decimal places will be displayed. If set to 2, the value will be shown with two decimal places (e.g., 3.54).

Default state is Idle - If the option is checked when the transaction is completed, the pump will return to the Idle state. If the option is unchecked, the pump will enter the preauthorized state.

Zero transaction sent to POS upon deauthorization, If this option is checked, deauthorizing the fueling point will result in a zero transaction.

Grades

Grades represent the fuels provided to customers and can consist of either base products or blends of base products. Blends are now quite rare, and EmuPSS does not support them. Each grade has a unique name and ID for identification. Additionally, a price is assigned to each grade for predefined price groups, which are explained in a separate [chapter](#).



1 List of grades with prices

Each grade in the list is shown with its ID, name, and price for every defined price group. Only one grade can be selected, and the buttons below are associated with the currently selected grade in this list.

2 Update button

Pressing this button opens the form filled with the current values for the selected grade. You can update the name of the grade and/or the price for each defined price group. Prices are entered separated by a space, and the price groups are shown above the editable box.

0.820-0.845 kg/L for diesel
0.720-0.775 kg/L for gasoline

0.00085 for diesel fuel
0.0012 for gasoline

Density of a fuel at 15°C measured in kilograms per liter.

The volume temperature coefficient (TC) describes how volume changes with temperature, which can be approximated using a linear function.

3 New button

Pressing this button opens a dialog to set the unique ID for a new grade. After that, the form displayed is the same as above, but all the relevant fields are empty.

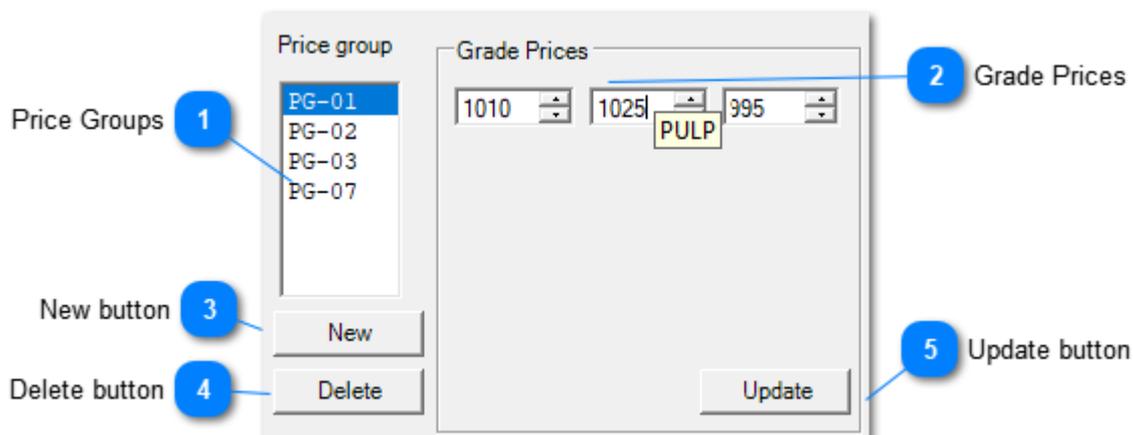
4 Delete button

Pressing this button will delete the selected grade after confirmation. This action should be undertaken with caution, as it may disrupt the configuration of the fuel dispensers, price poles and tanks.

Price Bank

The fuel dispensed to customers at the forecourt is referred to as a grade, and each grade is assigned a unique ID. If each grade can have multiple prices, these prices are organized into different price groups. Each price group is also given a unique ID.

There is no limit to the number of price groups you can define in a price bank. However, each price group must include prices for all grades that are specified in the forecourt.



1 Price Groups

In the image above, there are four price groups (1, 2, 3, and 7). Selecting any of these price groups fills the control to the right with the grade prices defined in that specific group.

2 Grade Prices

Each grade is represented by an editable box. To save space, there is no label, but you can check the grade associated with a particular control by hovering your mouse over it, which will display a tooltip with the grade's name. Prices are stored as integers within the range of 0000 to 9999. This is how the prices are actually stored internally, with only a decimal point inserted in the correct position to form the actual price.

3 New button

To add a new Price Group, simply provide an ID in the confirmation dialog. The dialog ensures that the ID is unique and within a valid range. The prices for the newly created Price Group will be copied from the first Price Group in the list. You can update these prices to your desired values after the insertion is complete.

4 Delete button

Clicking this button will delete the currently selected price group after you confirm your choice.

5 Update button

Clicking this button will save the manually updated grade price values for the selected price group. If you do not click "Update" and instead switch to another price group, the changes you made to the current price group's prices will be lost.

The changes you make will only be saved if you close this dialog by pressing the OK button. If you close the dialog any other way, you will receive a warning that you may lose any changes you made.

Forecourt Devices

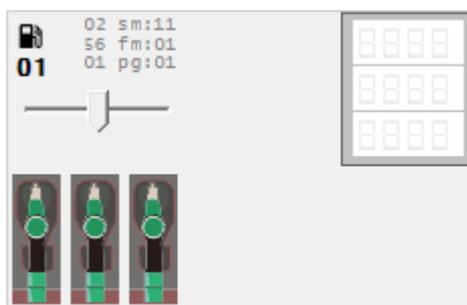
The core component of the PSS forecourt controller application is its device interfaces. For each device protocol, these interfaces convert device specifications into standardized logical devices that perform essential functions relevant to each type of device. Examples of these devices include pumps, payment terminals, tank gauge systems, wash machines, and price displays.

EmuPSS does not handle device protocols directly; instead, it focuses exclusively on logical standard devices, which include:

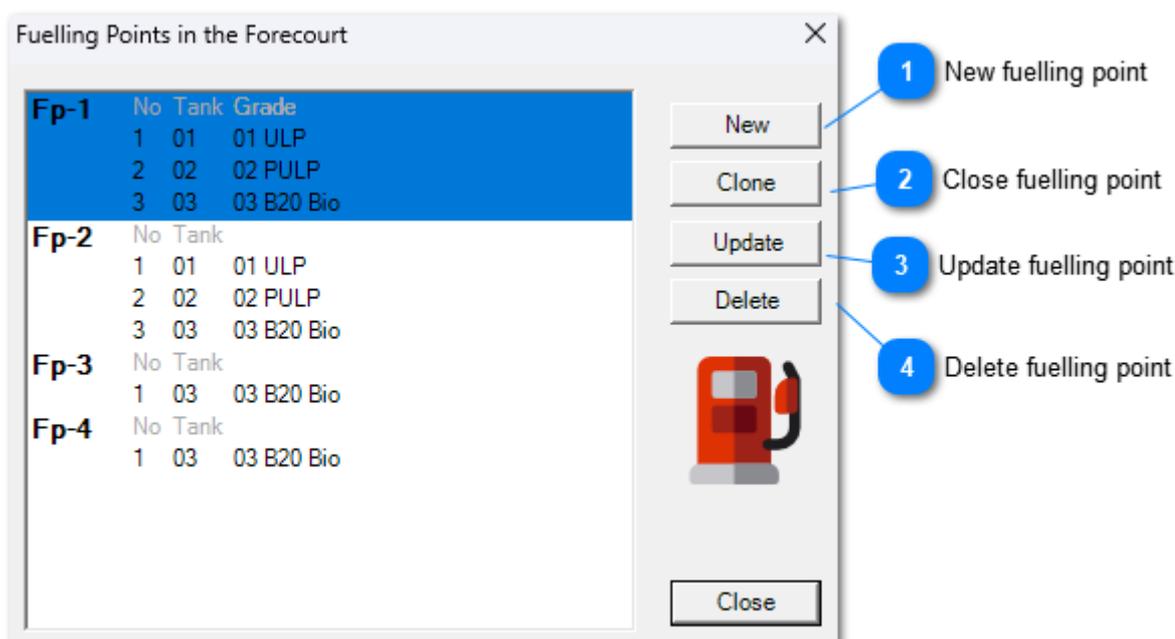
- [fuelling points](#)
- [tanks](#)
- [wash points](#)
- [price poles](#)
- [EPTs](#) (Electronic Payment Terminals)

Fuelling Points

A dispenser is a device that dispenses fuel and is usually identified by the manufacturer's name and model. A dispenser can have multiple fuelling points, and each fuelling point can have several grade options. Fuelling points are the individual dispensing points in the forecourt. The double-sided dispenser represents two fuelling points. Each side works independently from the other. Single-sided dispensers represents one fuelling point only.



You can add, delete, or update existing fuelling points. Additionally, you have the option to duplicate a selected fuelling point, which creates a new entry in the list with the same features as the original. This is particularly useful when entering two fuelling points for the same double-sided dispenser.



1 New fuelling point

Clicking this button will open a [detailed dialog](#) for defining the fuelling point using the unique ID you provided, and it will subsequently add the defined fuelling point to the forecourt.

2 Close fuelling point

Clicking this button will duplicate the selected fuelling point to a newly created fuelling point with a unique ID you provided.

3 Update fuelling point

Clicking this button will open a [detailed dialog](#) for editing the selected fuelling point and will subsequently update the selected fuelling point.

4 Delete fuelling point

Clicking this button will remove the selected fuelling point from the forecourt, but only after you confirm your decision.

Fuelling Point Update Form

Grade Options

The grade options define the type of fuel dispensed from each nozzle at the fuelling point. You can add new nozzles, remove existing ones, or update their properties.

A nozzle is characterized by the grade it dispenses and the tank from which that particular fuel grade is drawn. This is important because there may be multiple tanks containing the same fuel grade at the forecourt.

Additionally, you can set designated totals for the selected grade option.

After making any changes to the selected grade option, be sure to click the "Update" button to save your modifications.

The maximum number of grade options for a fuelling point is eight. Grade option IDs may include holes, but this is not common practice.

The screenshot shows the 'Grade Options' tab of the Fuelling Point Update Form. It features a table with columns 'No', 'Gr', and 'Tank'. The table contains three rows: 1. 01 01, 2. 02 02, and 3. 03 03. To the right of the table are 'New' and 'Remove' buttons. Below the table are four input fields: 'Grade' (a dropdown menu showing 'Gr-01 ULP' and other options), 'Tank' (a dropdown menu showing 'Tg-1 ULP 20.0T'), 'Total' (a numeric input field with a spinner set to '1'), and 'Pump Total' (a numeric input field with a spinner set to '2'). An 'Update' button is located to the right of the 'Pump Total' field.

Pump State

The fuelling point status is determined by its main state and sub-state flags. You can set any state you wish for any fuelling point. While EmuPSS is operating with POS clients, some sub-state flags and states may change in response to commands and state transitions.

The screenshot shows the 'Pump State' tab of the Fuelling Point Update Form. It features a 'Main State' dropdown menu set to 'Idle'. To the right is a 'Sub State(s)' section with a list of checkboxes: 'Locked By POS' (unchecked), 'Is Supervised' (checked), 'Online' (checked), 'Emergency Stopped' (unchecked), 'Has Free Buffer' (checked), 'Is In Error State' (unchecked), 'Has Active Grades' (checked), and 'Is Preset' (unchecked).

Operation Modes

Service modes consist of a set of dispense control parameters that are generally active both before and after the filling process. In contrast, fuelling modes comprise a collection of parameters that are active during the filling process.

A fuelling mode group is a collection of fuelling modes designated for each grade, similar to how a price group represents a set of prices for each grade.

If you have multiple operation modes, selecting a different mode will change all associated parameters.

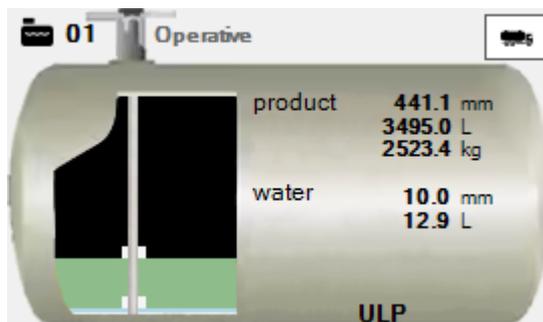
Using this dialog, you can update the currently selected fuelling mode group ID and price group ID for the active operation and service mode. Additionally, you can edit the currently active service mode, fuelling mode group, and price group for the fuelling point you are redefining.

The overall topic of operation, service, and fuelling modes is quite complex and extends beyond the scope of this emulation. However, what is important for EmuPSS is the price group, as prices from the active price group will be used to determine the price for a grade at the fuelling point during dispensing operations.

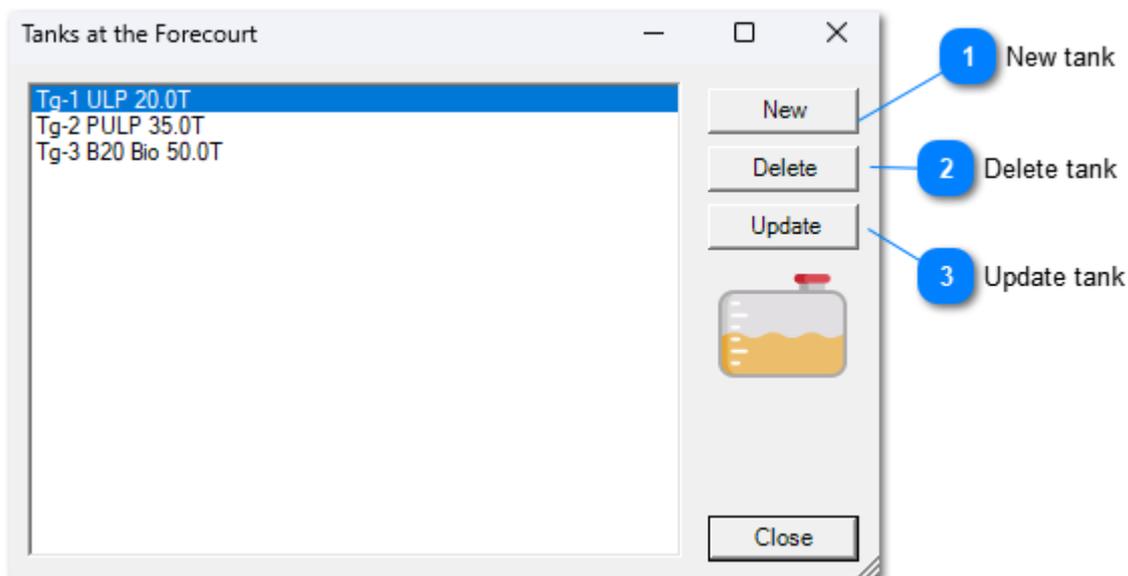
	Selected		Active
Op. mode:	01	Set	01
SM Id:	11	Set	11
FMg Id:	01	Set	01
PG Id:	01	Set	01

Tanks

On a filling station, you'll always find one or more tanks holding the base products and dispensers, where the different nozzles are linked to one or more tanks. The fuel delivered to the customer is also known as a fuel grade. In addition to the pumps and tanks, a site can have a Tank Gauge System and normally one Tank Gauge in each tank.



You can add, delete, or update existing tanks.

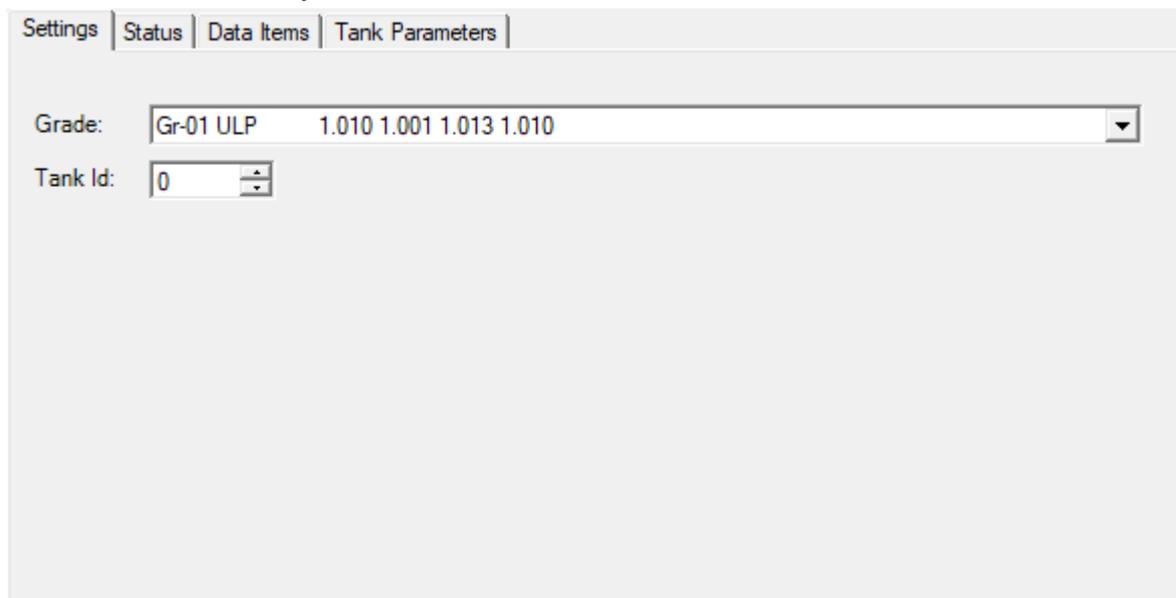


- 1 New tank**
Clicking this button will open a [detailed dialog](#) for defining the tank using the unique ID you provided, and it will subsequently add the defined tank to the forecourt.
- 2 Delete tank**
Clicking this button will remove the selected tank from the forecourt, but only after you confirm your decision..
- 3 Update tank**
Clicking this button will open a [detailed dialog](#) for editing the selected tank and will subsequently update the selected tank.

Tank Update Form

Settings

Tank Id is not used so you can leave it at value zero.

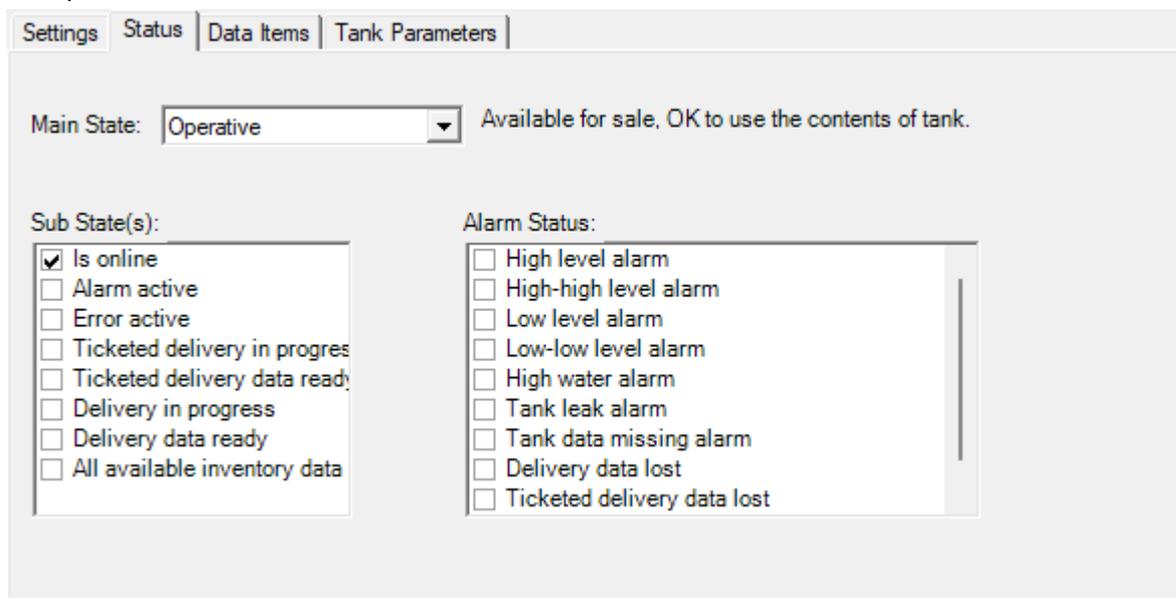


The screenshot shows the 'Settings' tab of the Tank Update Form. It features a tabbed interface with 'Settings', 'Status', 'Data Items', and 'Tank Parameters'. The 'Settings' tab is active. It contains a 'Grade' dropdown menu with the selected value 'Gr-01 ULP' and a list of other grades: '1.010', '1.001', '1.013', and '1.010'. Below the grade menu is a 'Tank Id' spinner control set to the value '0'.

Status

The status of a tank is determined by its main state, sub-state flags, and alarm flags. You can assign any state to any tank as needed.

Alarm values are set as percentages. For product alarms, these percentages are calculated based on the Gross Standard Volume relative to the Maximum Fill Capacity. For water alarms, the percentages reflect the water level in relation to the tank's height. $HIGH_LEVEL = 0.95$, $HIGH_HIGH_LEVEL = 0.98$, $LOW_LEVEL = 0.06$, $LOW_LOW_LEVEL = 0.05$, $HIGH_WATER = 0.01$.



The screenshot shows the 'Status' tab of the Tank Update Form. It features a tabbed interface with 'Settings', 'Status', 'Data Items', and 'Tank Parameters'. The 'Status' tab is active. It contains a 'Main State' dropdown menu with the selected value 'Operative' and a description: 'Available for sale, OK to use the contents of tank.' Below the main state are two columns of checkboxes. The left column is labeled 'Sub State(s):' and contains: 'Is online' (checked), 'Alarm active', 'Error active', 'Ticketed delivery in progress', 'Ticketed delivery data ready', 'Delivery in progress', 'Delivery data ready', and 'All available inventory data'. The right column is labeled 'Alarm Status:' and contains: 'High level alarm', 'High-high level alarm', 'Low level alarm', 'Low-low level alarm', 'High water alarm', 'Tank leak alarm', 'Tank data missing alarm', 'Delivery data lost', and 'Ticketed delivery data lost'.

Data Items

You can only update the values in bold; all other values are calculated automatically. The calculations use the density and volume temperature coefficient for the specific grade stored in the tank, along with the tank's height and shell capacity. These factors together define a hypothetical perfect cylinder that represents the tank's geometry.

Settings	Status	Data Items	Tank Parameters		
Product level:	<input type="text" value="441.1"/>	mm	Max safe fill capacity:	<input type="text" value="19000.00"/>	L
Water level:	<input type="text" value="10.0"/>	mm	Shell capacity:	<input type="text" value="20000.00"/>	L
Total observed volume:	<input type="text" value="3521.05"/>	L	Product mass:	<input type="text" value="2523.4"/>	kg
Water volume:	<input type="text" value="12.94"/>	L	Product density:	<input type="text" value="722"/>	g/m3
Gross observed volume:	<input type="text" value="3508.11"/>	L	Product TC density:	<input type="text" value="720"/>	g/m3
Gross standard volume:	<input type="text" value="3495.00"/>	L	Density probe temperature:	<input type="text" value="18.0"/>	°C
Available room:	<input type="text" value="15478.95"/>	L	Average temperature:	<input type="text" value="18.0"/>	°C
Last update:	<input type="text" value="Monday , 3 March 2025"/>		Temperature sensor 1:	<input type="text" value="17.1"/>	°C
			Temperature sensor 2:	<input type="text" value="18.0"/>	°C
			Temperature sensor 3:	<input type="text" value="18.9"/>	°C

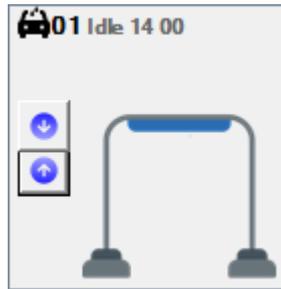
Tank parameters

Tank height is the only parameter that can be updated. Tank height and shell capacity together define a hypothetical perfect cylinder, which was used to automatically calculate the table of volumes at different fulfillment percentages.

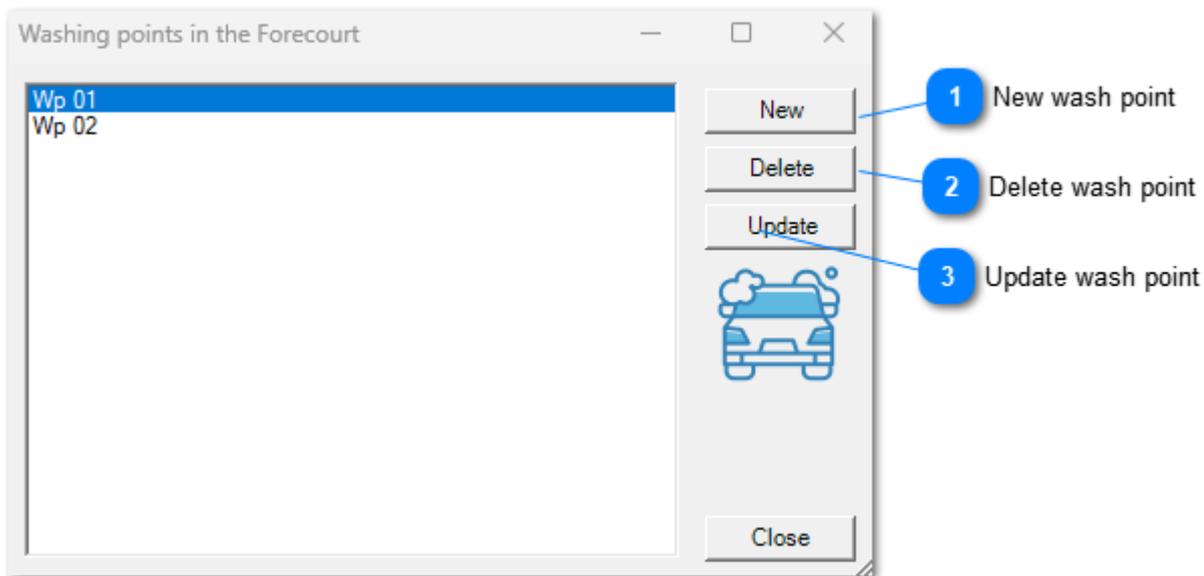
Settings	Status	Data Items	Tank Parameters			
Volume at 100%:	<input type="text" value="20000.00"/>	L	Volume at 50%:	<input type="text" value="10000.00"/>	L	Tank height: <input type="text" value="1900.0"/> mm
Volume at 95%:	<input type="text" value="19626.14"/>	L	Volume at 45%:	<input type="text" value="8728.89"/>	L	
Volume at 90%:	<input type="text" value="18959.12"/>	L	Volume at 40%:	<input type="text" value="7470.60"/>	L	
Volume at 85%:	<input type="text" value="18118.80"/>	L	Volume at 35%:	<input type="text" value="6238.38"/>	L	
Volume at 80%:	<input type="text" value="17152.43"/>	L	Volume at 30%:	<input type="text" value="5046.32"/>	L	
Volume at 75%:	<input type="text" value="16089.98"/>	L	Volume at 25%:	<input type="text" value="3910.02"/>	L	
Volume at 70%:	<input type="text" value="14953.68"/>	L	Volume at 20%:	<input type="text" value="2847.57"/>	L	
Volume at 65%:	<input type="text" value="13761.62"/>	L	Volume at 15%:	<input type="text" value="1881.20"/>	L	
Volume at 60%:	<input type="text" value="12529.40"/>	L	Volume at 10%:	<input type="text" value="1040.88"/>	L	
Volume at 55%:	<input type="text" value="11271.11"/>	L	Volume at 5%:	<input type="text" value="373.86"/>	L	

Wash Points

On a filling station, you can usually find one or more washing machines. Some stations are equipped with car washes. Car washes are sometimes offered free of charge or at a discounted price with a certain amount of fuel purchased.



You can add, delete, or update existing wash points.



- 1 New wash point**
Clicking this button will open a [detailed dialog](#) for defining the wash point using the unique ID you provided, and it will subsequently add the defined wash point to the forecourt.
- 2 Delete wash point**
Clicking this button will remove the selected wash point from the forecourt, but only after you confirm your decision.
- 3 Update wash point**
Clicking this button will open a [detailed dialog](#) for editing the selected wash point and will subsequently update the selected wash point.

Wash Point Update Form

Wash Programs

Each wash program used on a site is assigned a unique ID and name.

The duration is specifically added to the EmuPSS emulator to determine how long washing should last for a particular program.

ID	NAME	SEC
01	Wash 1	10
02	Wash 2	20
03	Wash 3	30
04	Wash 4	40
05	Wash 5	50
06	Wash 6	60
07	Wash 7	70
08	Wash 8	80
09	Wash 9	90
10	Wash 10	100

Program Name:

FcWashId:

Duration (sec):

Total-Count:

Total-Wash Units:

Total-Money:

Status

The status of a wash point is determined by its main state, sub-state flags, and guidance indicators. You can assign any state to any wash point as needed.

Installation data received, opened/ready for operation.

Mainstate:

Substates:

- is locked by POS
- is halted by PSS (due to wash)
- is online (see online/offline)
- is stopped
- has free buffer
- is in error state
- emergency stopped
- machine in undefined state

Substates 2:

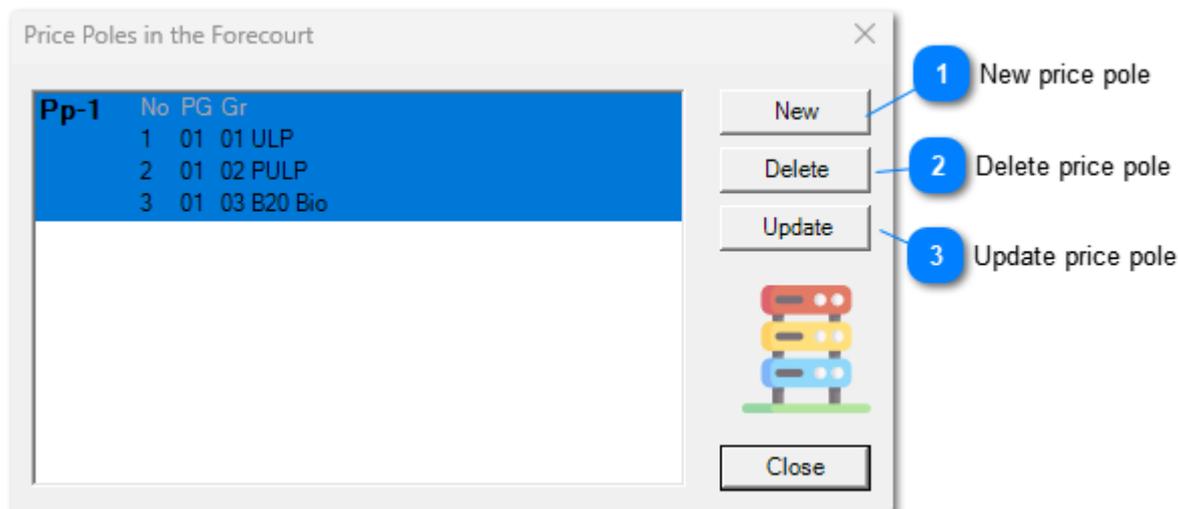
- car wash totals ready
- maintenance in progress

Guidance Indicators:

- None
- Forward
- Forward (blinking)
- Stop
- Stop (blinking)
- Move back
- Move back (blinking)

Price Poles

The prices displayed on the price poles are taken from the same price bank used for the pumps, so the POS only has to maintain one set of prices for the forecourt. Each price in the Price Bank can be linked to the positions on the price pole, and the price pole will automatically be updated when new prices are received from the POS.



1 New price pole

Clicking this button will open a [detailed dialog](#) for defining the price pole using the unique ID you provided, and it will subsequently add the defined price pole to the forecourt.

2 Delete price pole

Clicking this button will remove the selected price pole from the forecourt, but only after you confirm your decision.

3 Update price pole

Clicking this button will open a [detailed dialog](#) for editing the selected price pole and will subsequently update the selected price pole.

Price Pole Update Form

Price Pole Options

Price pole options determine which price and grade are displayed on each sign of the price display. To set this up, you connect each position on the price pole with a specific grade and price group, from which the price for that grade is derived.

You have the ability to add new options or remove existing ones.

Additionally, after making any changes to a selected option, be sure to confirm the updates by pressing the "Update" button.

NO	PG	GR
01	01	01
02	01	02
03	01	03

New

Remove

Grade: Gr-01 ULP 1.010 1.001 1.013 1.010

Price Group: 1 Update

Price Pole State

The status of a wash point is determined by its main state and sub-state flags. You can assign any state to any wash point as needed.

Price Pole Options Price Pole State

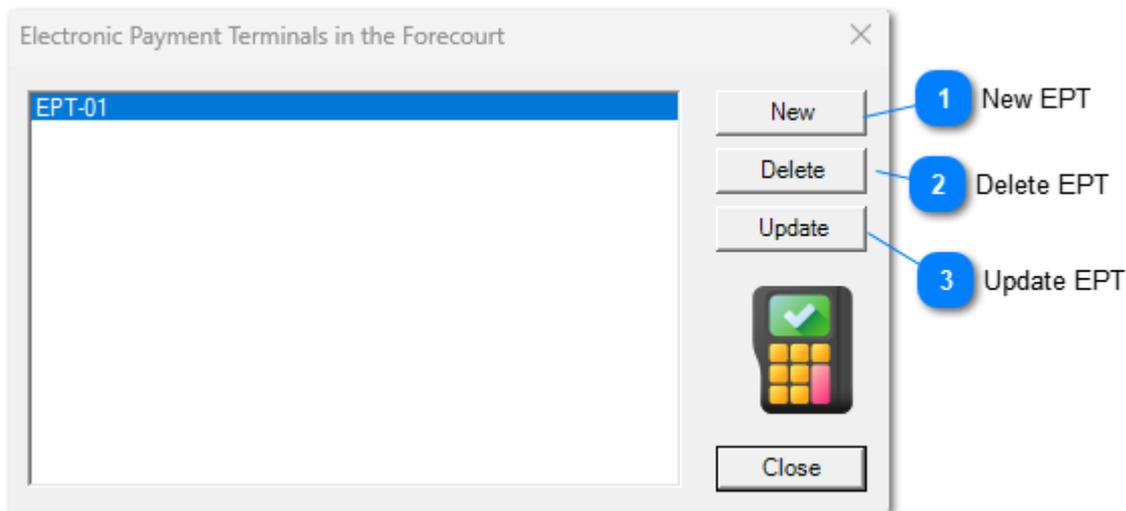
Main State: Idle

Sub State(s):

- Is online
- Error active

EPTs (Electronic Payment Terminals)

The EPT can be a simple Pump Payment Terminal (PPT), an intelligent or unintelligent Outdoor Payment Terminal (OPT), or Indoor Payment Terminal (IPT) or a simple Attendant Tag Reader (ATR). Supported payment methods are note and card payments, and any payment method can be combined with supplementary cards (e.g. bonus cards). The protocol also supports payment for more than one fuel transaction in one payment sequence.



1 New EPT

Clicking this button will open a [detailed dialog](#) for defining the EPT using the unique ID you provided, and it will subsequently add the defined EPT to the forecourt.

2 Delete EPT

Clicking this button will remove the selected EPT from the forecourt, but only after you confirm your decision.

3 Update EPT

Clicking this button will open a [detailed dialog](#) for editing the selected EPT and will subsequently update the selected EPT.

EPT Update Form

EPT States

The status of a EPT is determined by its main state and sub-state flags. You can assign any state to any EPT as needed.

EPT States

Main State:

Sub State(s):

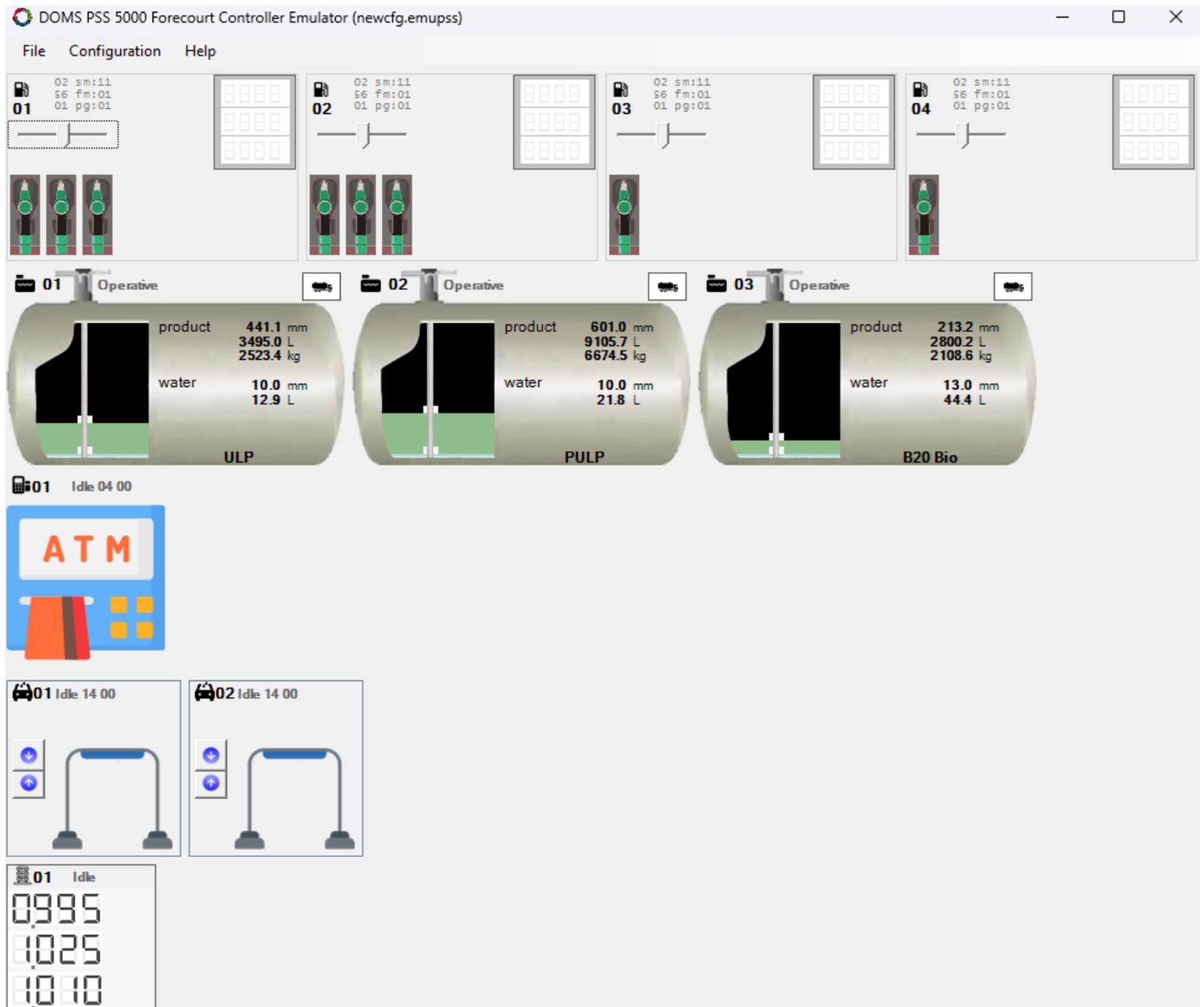
- Is online
- Error active

3. Working with EmuPSS

EmuPSS is designed to emulate the Doms PSS Forecourt Controller, which offers services that simplify the process for Point of Sale (POS) system designers to create filling station systems without requiring in-depth knowledge of the field or the devices involved.

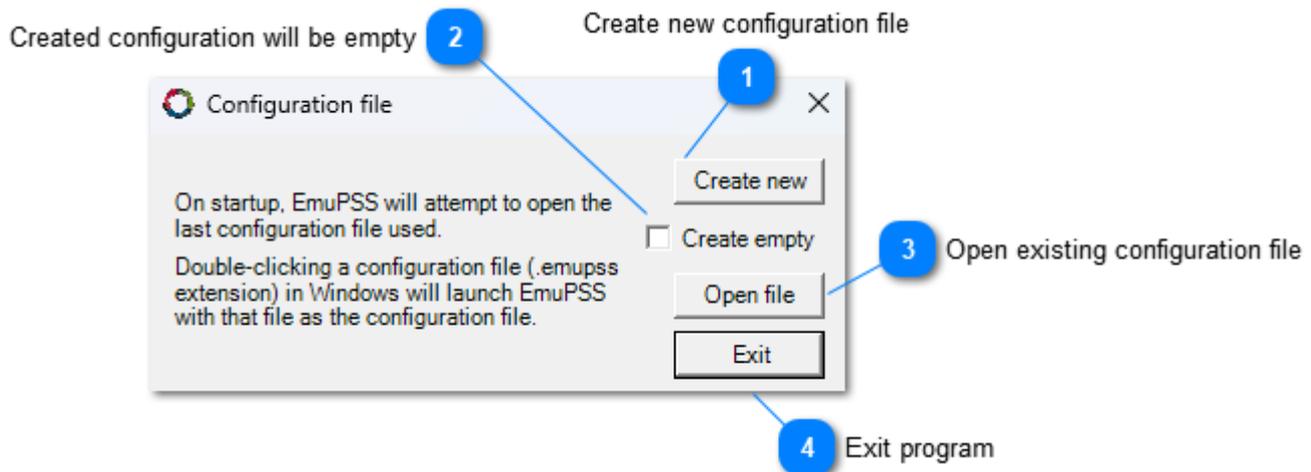
To use EmuPSS, you will need an additional program to act as your POS system. In this document, we will describe its functionality alongside Demo POS, an application provided by DOMS and available to all its customers.

In this chapter, I will demonstrate how you can simulate specific situations that occur on a real forecourt and how you can set particular states for the forecourt devices using your POS system.



Application Start

When the application starts, it attempts to listen for TCP/IP connections on ports 5000, 5001, 5004, and 5005. These ports are designated for communication with POS clients and cannot be changed. If the application is unable to open these ports (possibly because they are already in use), it will notify the user of the issue and exit. You can check which application is using any of these ports and either stop it or reconfigure it. Alternatively, restarting your computer can often resolve the issue. The configuration data discussed in the previous chapter is stored in a single file. EmuPSS must open this file upon exiting in order to function as a DOMS emulator. Initially, the application will attempt to access the last file used. If that file is not found or is corrupted, you will have the option to select a new file or create a new one with default settings. Furthermore, if you double-click any file with the ".emupss" extension, EmuPSS will try to open that file first.



- 1 Create new configuration file**
Pressing this button will create a new configuration and save it to the selected location with the specified filename. It can be created either empty or with default devices and settings, depending on the "Create empty" option.
- 2 Created configuration will be empty**
Selecting this option will create a new configuration without any default elements included.
- 3 Open existing configuration file**
Clicking this button will open a dialog to choose an existing configuration file for EmuPSS to load
- 4 Exit program**
Pressing this button will close the program.

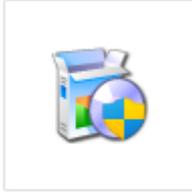
Working with Demo POS

To use EmuPSS and explore its features, you'll need a POS Client program. This program can either utilize PSS Interface Components to connect to DOMS (or EmuPSS, its emulator) for control, or it can implement the TCP/IP DOMS protocol independently.

Demo POS is a standard tool provided by the manufacturer, Doms A/S, and is available to all developers. As a result, users of EmuPSS are likely already familiar with it.

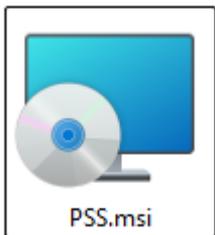


DemoPos.msi



setup.exe

Please note that Demo POS relies on PSS Interface Components, so these components must be installed before installing Demo POS.



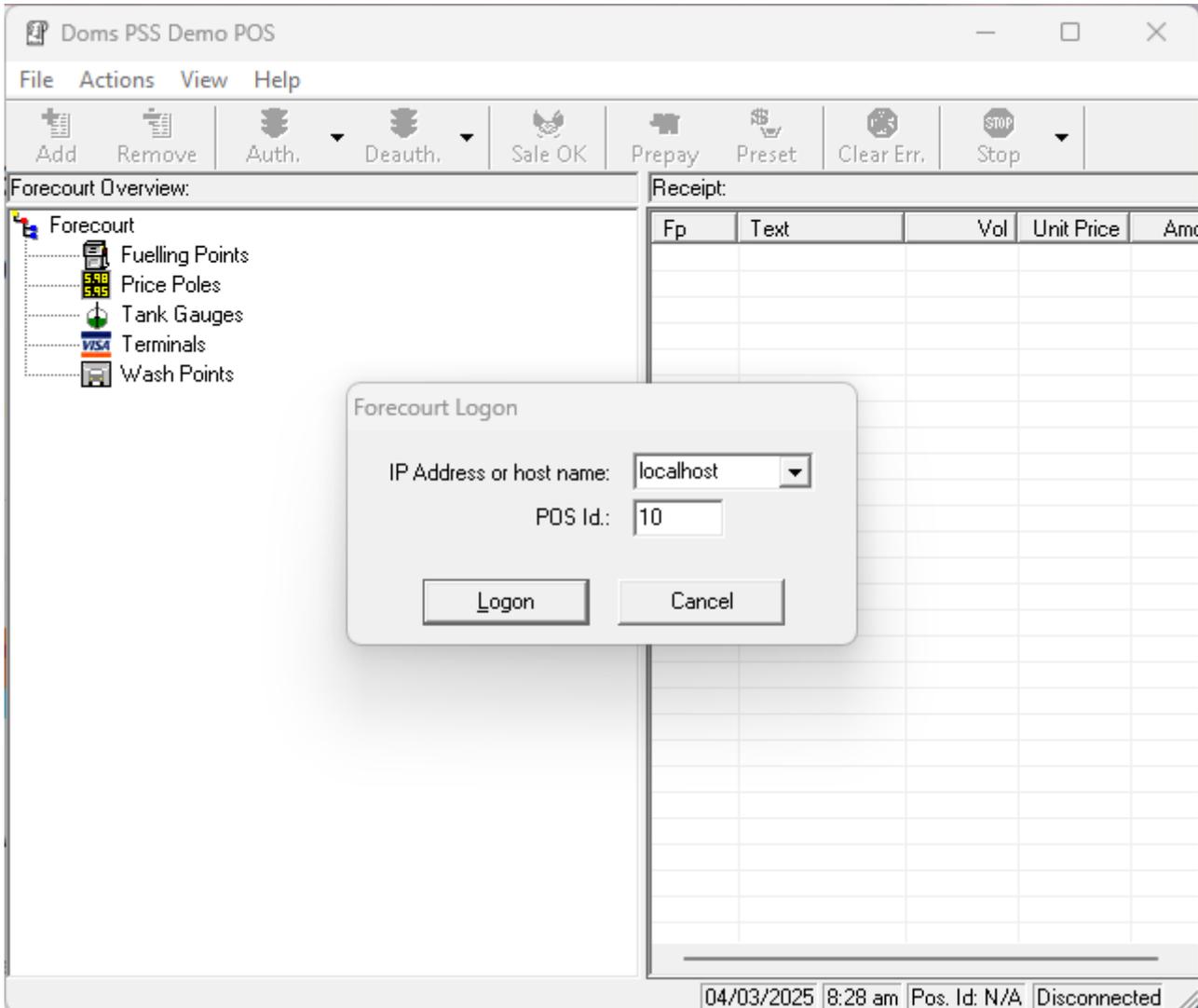
PSS.msi

Connecting to EmuPSS

To set up the system, start by running EmuPSS on one computer within your local network. Once EmuPSS is running, it will be ready to accept client connections.

Next, launch Demo POS on the same computer or on a different one within the same network. To connect Demo POS to EmuPSS, enter the IP address of the computer where EmuPSS is running.

If both programs are running on the same computer, you can use "localhost" or "127.0.0.1" as the IP address. If Demo POS is running on a different computer, use the local IP address of the computer running EmuPSS.

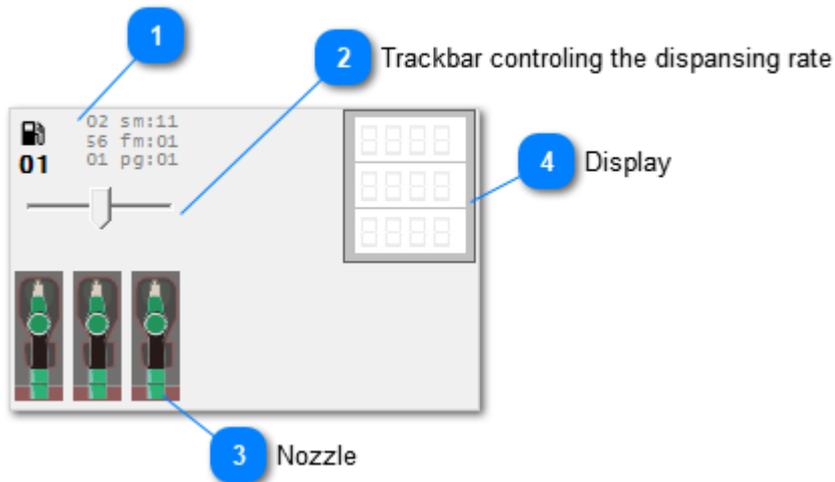


The POS ID is an integer that serves to identify this specific connection to EmuPSS. Since multiple connections may exist, and some operations may be restricted to the connection that performed a previous operation, it is important to use a unique POS ID for each POS client connecting to EmuPSS. Although this is not strictly enforced by EmuPSS, it is a best practice to ensure clarity and avoid conflicts.

Dispense Control

The fuelling point control is the main component of dispense control. This control allows you to simulate dispense of fuel to the customer and adjust the fuelling point's status as desired.

Status of the fuelling point



1 Status of the fuelling point

These provide information about the current state of the fuelling point and its active settings, which change during and after certain operations.

2 Trackbar controlling the dispensing rate

This trackbar indicates the dispensing speed. When positioned at the far left, no dispensing occurs. At the far right, dispensing happens at the fastest rate. Users can adjust this trackbar to simulate different dispensing speeds. Please note that this setting only takes effect while fueling is authorized.

3 Nozzle

To lift the nozzle, simply click on it with the left mouse button. The nozzle will then disappear, leaving only its empty slot visible. To replace the lifted nozzle, click on the empty slot, and the nozzle will reappear in its original position.

4 Display

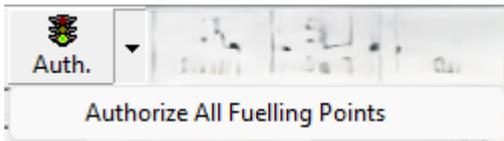
The display is designed to resemble a real fuel dispenser. It will also change the background color to reflect the current status of the fuelling point.

Authorize For Fuelling

Fuel dispensing can only occur when the fueling point status is "Preauthorized." If the status is "Idle," lifting the nozzle will not activate the pump; instead, it will change the fueling point status to "Calling." When the pump status is "Preauthorized," lifting the nozzle will initiate the fueling process, changing the status to "Fuelling." To stop the dispensing process, simply place the nozzle back in its holder. This action will change the status to "Unavailable," and a transaction for that specific dispensing will be created. No further dispensing can occur at this fueling point until this transaction is cleared.

There are various methods to authorize the fueling point using Demo POS. In this chapter, we will cover all of these methods, namely [simple](#), [preset](#) and [prepay](#).

Simple authorization



This is the simplest form of authorization, with no additional options available. The authorization parameters are saved, and there are no restrictions on the subsequent dispensing operation.

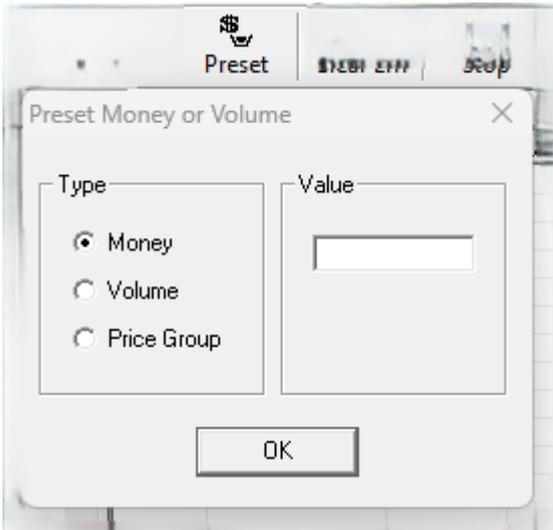
If you want to authorize all fueling points in the forecourt, click the downward arrow to open the menu and select that option. Otherwise, clicking the button will only authorize the selected fueling point.

Preset Fuelling Point

There is a preset option available for authorizing fueling points, which includes options for setting volume, money, or selecting different price groups. The DOMS protocol also supports extended authorization that can combine these options; however, the Demo POS has implemented these options as exclusive.

When a pump is authorized with a preset, any transaction made by that pump will automatically be locked with the POS ID of the connection that authorized it. Once the transaction is completed, the preset will be canceled. If there has been a change in the price group, the default pricing will be reinstated for that fueling point.

To use this function successfully, the fueling point must be in an "Idle" state. Simply select the fueling point in the Demo POS, click on the Preset button, fill out the form, and then click OK.



The image shows a screenshot of a software interface. At the top, there is a toolbar with a 'Preset' button. Below it, a dialog box titled 'Preset Money or Volume' is open. The dialog has a close button (X) in the top right corner. Inside the dialog, there are two main sections: 'Type' and 'Value'. Under 'Type', there are three radio buttons: 'Money' (which is selected), 'Volume', and 'Price Group'. To the right of these radio buttons is a text input field labeled 'Value'. At the bottom of the dialog, there is an 'OK' button.

Each of the three options is discussed under a separate topic:

- [Money](#)
- [Volume](#)
- [Price Group](#)

Money

Preset with money

Type	Value
<input checked="" type="radio"/> Money	5
<input type="radio"/> Volume	
<input type="radio"/> Price Group	

To limit the amount of money dispensed from the selected fueling point (in this case, Fp 3), you need to enter the desired amount. After confirming your input, the fueling point will change to a "Preauthorized" state. When you lift the nozzle by clicking on it, the fueling will begin. As the dispensed amount approaches the preset value, the flow will slow down and eventually stop once the specified amount is reached.

The screenshot shows the POS interface. On the left, a list of fueling points is displayed under the heading "Fuelling Points". The third item, "3 Fuelling 5.03 ltrs. \$5.00 (11) PA-B-OS", is highlighted in blue. On the right, a fueling station display shows the nozzle number "03" and the amount "03". The display also shows three digital readouts: "5.00", "5.03", and "0995".

This is the state after reaching the limit. When you replace the nozzle by clicking on the empty slot, a transaction will be created in the POS.

Volume

Preset with volume

Type	Value
<input type="radio"/> Money	
<input checked="" type="radio"/> Volume	10
<input type="radio"/> Price Group	

To limit the dispensed volume from the selected fueling point (in this case, Fp 3), you need to enter the desired amount. After confirming your input, the fueling point will change to a "Preauthorized" state. When you lift the nozzle by clicking on it, the fueling will begin. As the dispensed amount approaches the preset value, the flow will slow down and eventually stop once the specified amount is reached.

The screenshot shows the POS interface. On the left, a list of fueling points is displayed:

- 1 Idle (11) -A-B-QS-
- 2 Idle (11) -A-B-QS-
- 3 Fuelling 10.00 ltrs. \$9.95 (11) PA-B-QS-
- 4 Idle (11) -A-B-QS-

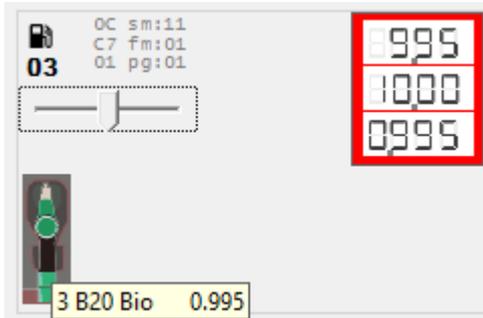
The third fueling point is highlighted in blue. On the right, a fueling station display shows the nozzle number '03', a fuel pump icon, and a digital display with three rows: '995', '000', and '995'. The top row is highlighted in orange.

This is the state after reaching the limit. When you replace the nozzle by clicking on the empty slot, a transaction will be created in the POS.

Price Group

Preset with Price Group

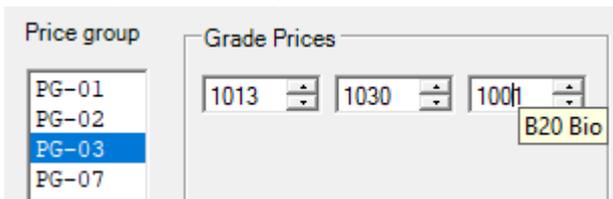
This is a special preset option. To use it, you must first define multiple service modes within the operational mode of the pump. Additionally, you need to establish several price groups. The service modes available to a fueling point must include the price group ID that you wish to preset. All these requirements will be explained in the following example.



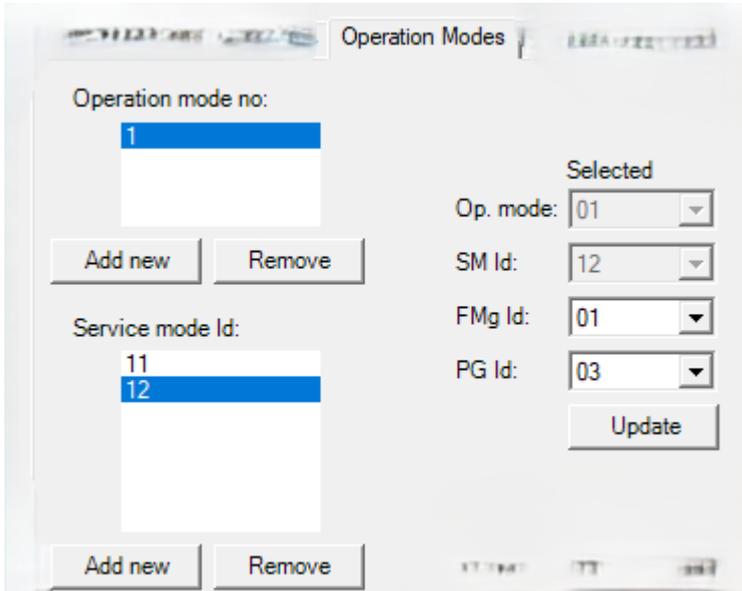
You can always check the price for each nozzle at the fueling point control. Simply hover your mouse over the nozzles, and a tooltip will pop up displaying the grade ID, name, and current price.

In previous transactions, this price was used to calculate the total amount for the fuel. It is the price defined for price group 1 (pg:01 in the status table).

We will now preset the next fueling price from price group 3. According to the settings for the price groups, at the end of operation the price should be set to 1.001.



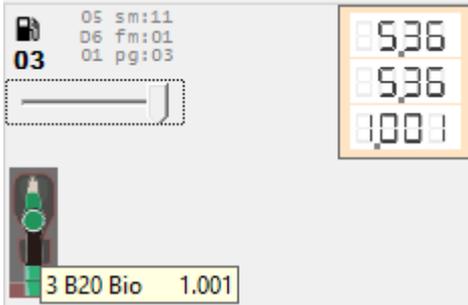
To enable this, the price group 3 must be available for the active operation mode. We need to add a new service mode and set the price group to 3 (PG Id) for that mode, as illustrated in the picture below.



Only then can the selection of a price group be successful, as DOMS checks if this group is allowed for that particular fuelling point by verifying if it is included in any of its service modes.

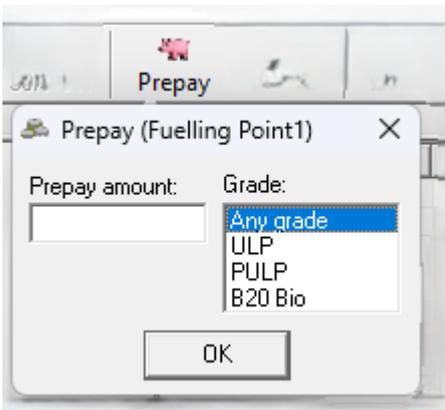
Type	Value
<input type="radio"/> Money	3
<input type="radio"/> Volume	
<input checked="" type="radio"/> Price Group	

After confirming this input, the fueling point is authorized, and its price group has been changed to 3, as indicated by "pg:03" in the list of statuses.



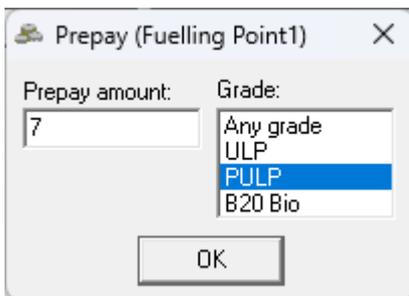
The price from price group 3 will be used for transactions made with these settings. This preset option allows you to use the price for a specific grade from a different price group for your next fueling. There are no volume or monetary limits associated with this type of authorization. After completing the transaction authorized with this preset, the price group will revert to the value defined for the active service mode.

Prepay Fuelling Point



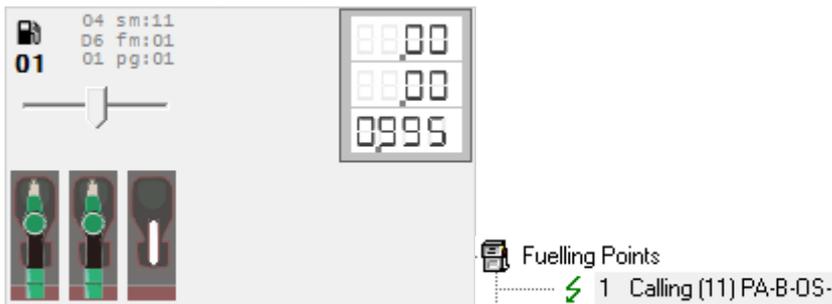
Prepay is similar to preset money, but it allows you to choose a specific fuel grade. When you select a fuelling point, you will see all the available grades. Unlike preset money, this option does not automatically authorize the pump; you must authorize it manually afterward. Additionally, the fuelling point does not need to be in the "Idle" state for the authorization to be successful.

If you choose "Any grade," any grade can be used for your next fuelling. If you select a specific grade, only that grade can be used for the next fuelling.

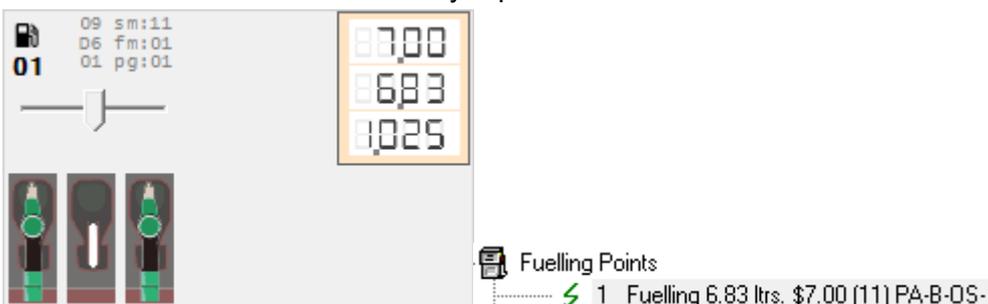


After confirming this input nothing happens, the fuelling point keeps the state. We authorize it with a [simple authorization](#).

Fuelling point 1 is now prepaid for grade option 2. If a non-matching grade nozzle is lifted, the state is set to "Calling," and dispensing does not start.



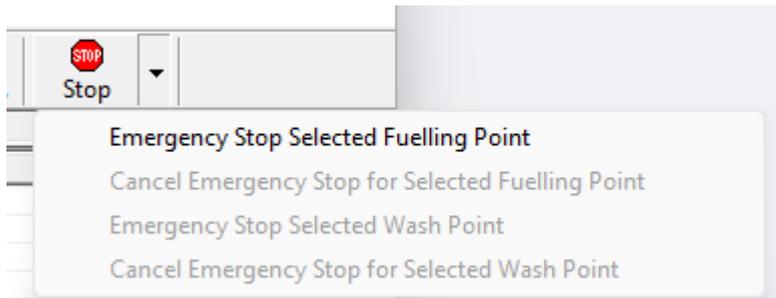
The incorrect nozzle is replaced, the correct nozzle is lifted, and dispensing begins until the preset amount is exceeded or the nozzle is manually replaced beforehand.



The transaction is created when the nozzle is replaced. It is also automatically locked with the POS ID of the connection that made the prepayment. Once this transaction is cleared, the fueling point is restored to its normal state.

Other functions

Emergency Stops

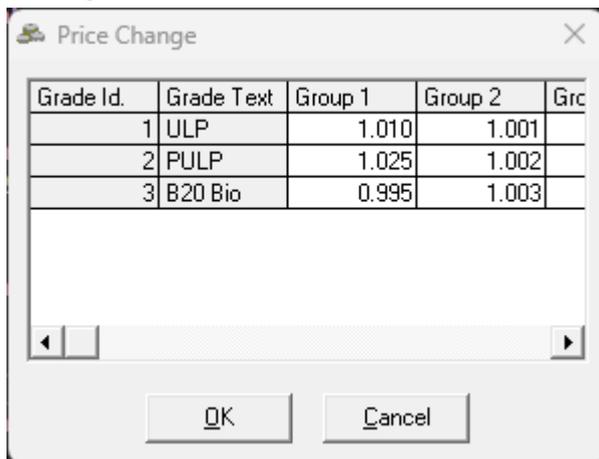


The emergency stop command activates an emergency stop flag for the fuelling point. If the status of the fuelling point is "Starting" or "Fuelling" when the command is received, it will change to one of the following:

- "Starting/Fuelling Paused" (if it can be restarted)
- "Starting/Fuelling Terminated" (if it cannot be restarted).

If the fuelling point is not currently fuelling, it will be prevented from starting. The status of the fuelling point will remain "Unavailable" until the emergency stop is cancelled.

Change Prices



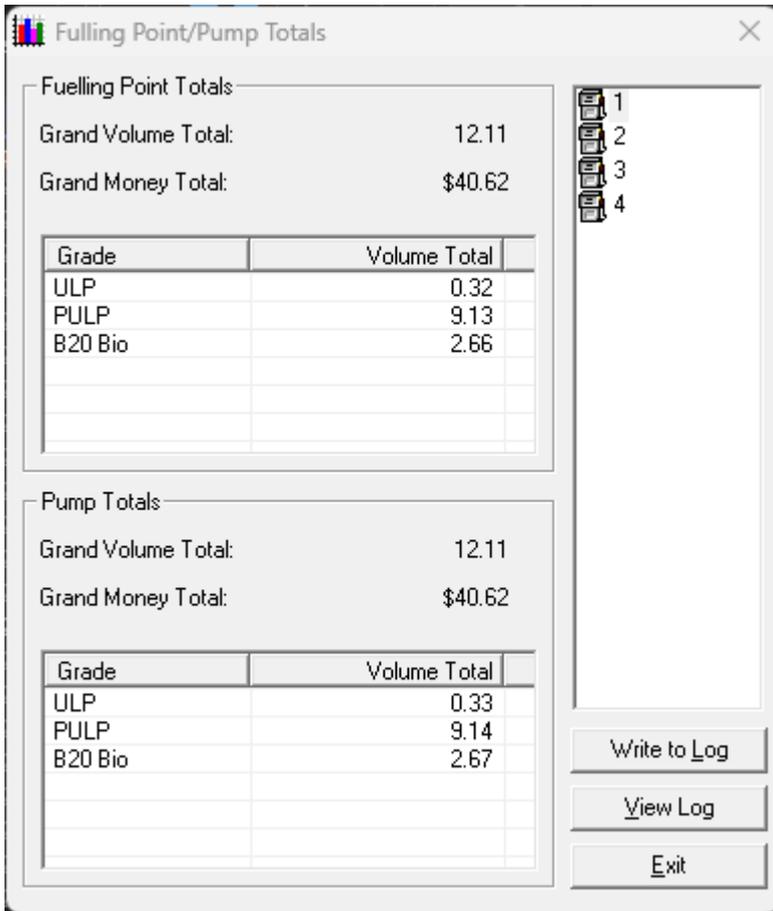
Demo POS can be used to change prices. To do this, select the "Change prices..." option from the menu and enter the new prices according to the configured price groups in the controller.

The new prices will take effect immediately.

When you hover your mouse over the nozzles of the fueling point controls, a popup will display the grade name along with the current price.

Additionally, the prices on the price poles will also be updated accordingly.

Fuelling Point/Pump Totals



Totalizers are accessible and can be monitored using Demo POS. DOMS distinguishes between two types of totals: fuelling point totals and pump totals. Fuelling point totals are typically maintained by forecourt controller, while pump totals are recorded and stored in the actual dispensers. EmuPSS manages both types of totals, which can differ due to their distinct initial values.

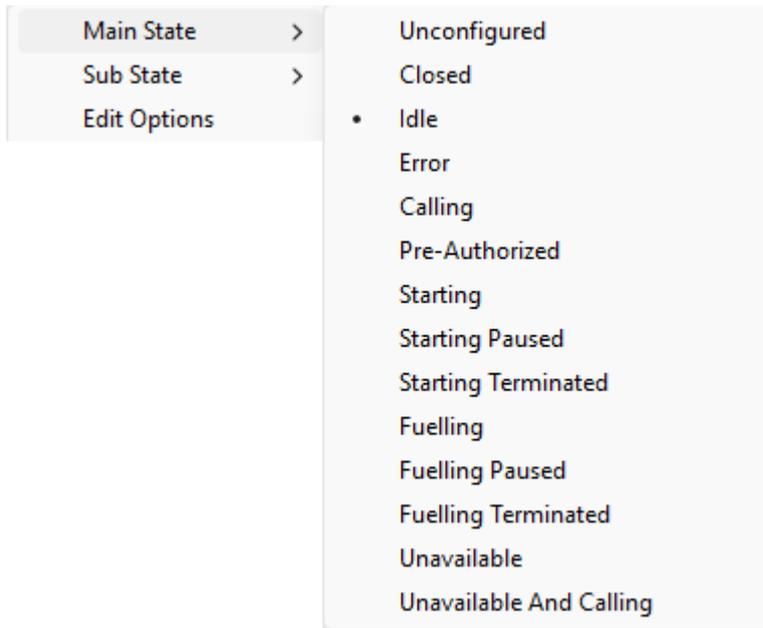
This chapter concludes this manual.

It contains enough information to get you up and running with your client application connected to EmuPSS as a DOMS and Forecourt emulator.

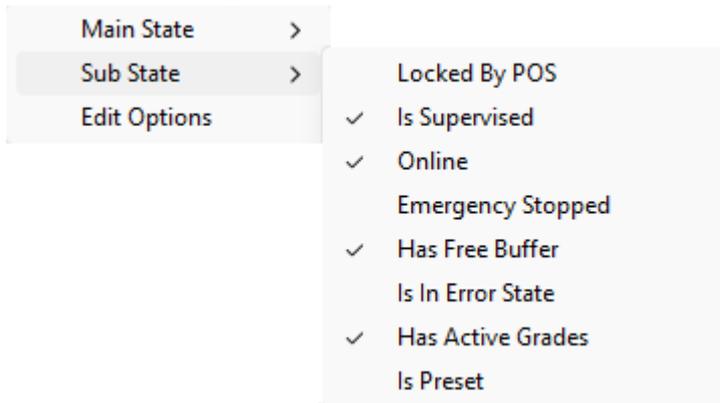
Quick Status Update

Users can quickly change the state of the fueling point by right-clicking anywhere on the control to open the context menu.

An elaborate menu will pop up, allowing you to easily change the main state,



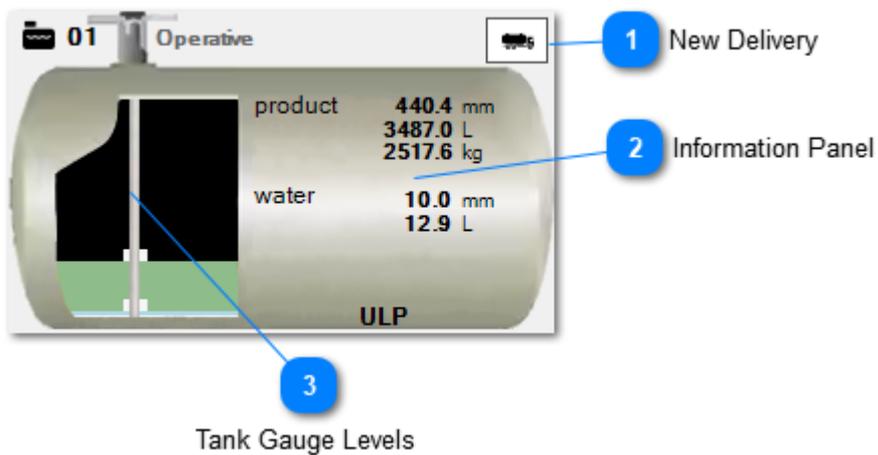
set or unset a flag for the substate,



or open a common dialog to update all configuration parameters by clicking on "Edit Options."

Wetstock control

The tank control is the main component of wetstock control. This control allows you to simulate the delivery of fuel into the tank and adjust the tank's status as desired.



- 1 New Delivery**

Pressing this button initiates the new delivery process for the tank. This procedure is explained in more detail in a separate [chapter](#).
- 2 Information Panel**

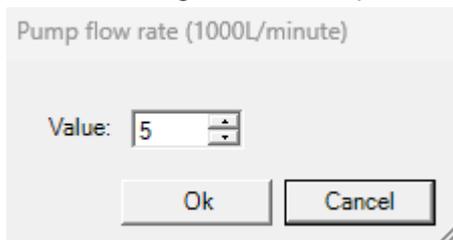
This panel displays real-time information on essential variables for monitoring fuel stock in the tank. The product value updates during fuel dispensing at the fueling point and while the delivery is in progress.
- 3 Tank Gauge Levels**

The tank is modeled as a perfect cylinder based on its height and shell capacity, allowing for the calculation of product and water float levels..

Delivery Management

Making delivery using EmuPSS is a very simple task.

 Pressing the button opens the following input form.

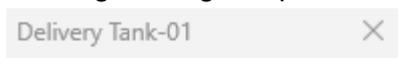


Pump flow rate (1000L/minute)

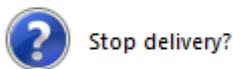
Value:

You may change the delivery rate, and if you confirm the delivery starts.

 While delivery is in progress the button changes the background color to indicate delivery. Clicking on it again opens confirmation dialog



Delivery Tank-01



Confirming the dialog the delivery stops.

During the delivery you can monitor real-time values product volume updates in the tank.

Doms PSS has features to collect delivery data from the connected Tank Gauge System and deliver them in a standard format to the POS system.

Each tank delivery is associated with a DeliveryReportSeqNo in order to indicate that it is a part of one site delivery report.

We define a site delivery as a collection of one more delivery to one or more tanks, all of which are associated with the same DeliveryReportSeqNo.

Only one set of delivery data is held by the PSS controller. Multiple deliveries to a tank will be added to form one single delivery (one TankDeliverySeqNo) if they occur while a site delivery is in progress.

The DeliveryReportSeqNo is incremented if a site delivery is not already in progress, and either:

- one tank reports a new delivery in progress, or
- a mark Delivery Starting is received

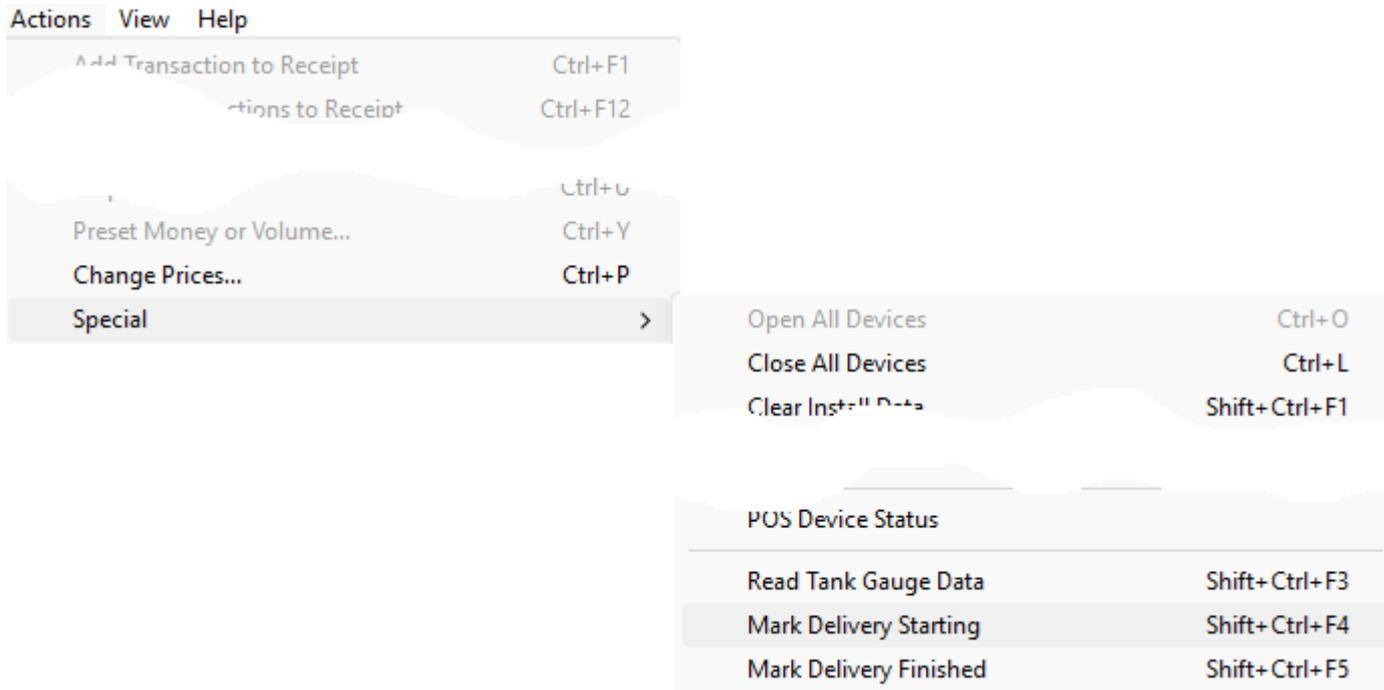
The use of mark DeliveryStarting and finishing messages is optional but available to make it easier to collect individual tank deliveries into one site delivery report.

The intended sequence of action to use the mark functionality to create a total delivery report is as follows:

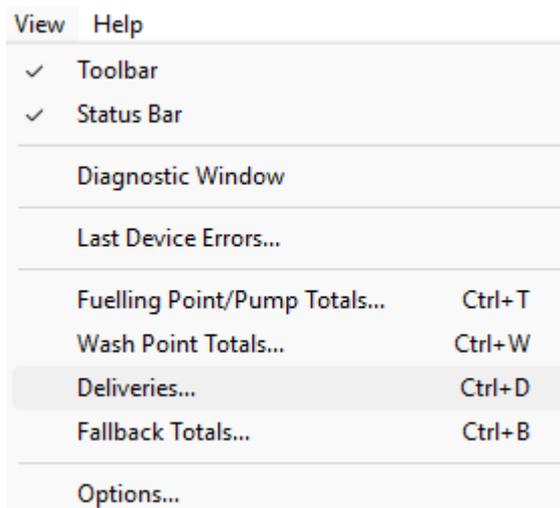
- POS sends the mark Delivery Starting before the actual delivery starts.
- Actual delivery starts
- Actual delivery stops
- POS sends the mark Delivery Finished

Tanks in Demo POS

Demo POS has commands to mark delivery, and they are available from the main menu as in image below:



The deliveries are available in the main menu, as in the image below:



This report shows last deliveries for all tank on the forecourt.

Tg.	Deliv. Rep. #	Seq. #	Product	Start Time	Stop Time	Start Vol.	Stop Vol.	Start Temp.	SI
1	1	1	1	05/03/2025 10:24:...	05/03/2025 10:26:...	3,513.03	11,041.16	18.0	
3	2	2	3	05/03/2025 8:29:4...	05/03/2025 8:30:1...	3,138.81	7,158.01	19.0	

This is an example of two deliveries made without using mark Delivery Starting and Finishing. You may notice DeliveryReportSeqNo is different for those two deliveries.

Tg.	Deliv. Rep. #	Seq. #	Product	Start Time	Stop Time	Start Vol.	Stop Vol.	Start Temp.	SI
1	2	2	1	05/03/2025 10:55:...	05/03/2025 10:56:...	11,041.16	14,721.57	18.0	
2	2	1	2	05/03/2025 10:55:...	05/03/2025 10:57:...	9,142.72	16,508.88	18.7	
3	2	3	3	05/03/2025 10:55:...	05/03/2025 10:57:...	7,158.01	14,526.54	19.0	

However, above is the corresponding report when delivery is marked with start and finish. You may notice DeliveryReportSeqNo is the same for all three deliveries (2).

Demo POS will also indicate the tank gauge data for the tanks (it periodically collects them, but you can request them by clicking the main menu item "Read Tank Gauge Data").

Tank Gauges

- 1 Operative -D-----0
 - Product Level: 131.12
 - Water Level: 1
 - Total Observed Volume: 14721.57
 - Water Volume: 12.94
 - Gross Observed Volume: 14708.63
 - Gross Standard Volume: 14653.68
 - Available Room: 4278.43
 - Average Temperature: 18
 - Data Last Updated: 01/01/2001
 - Max. Safe Fill Capacity: 19000
 - Shell Capacity: 20000

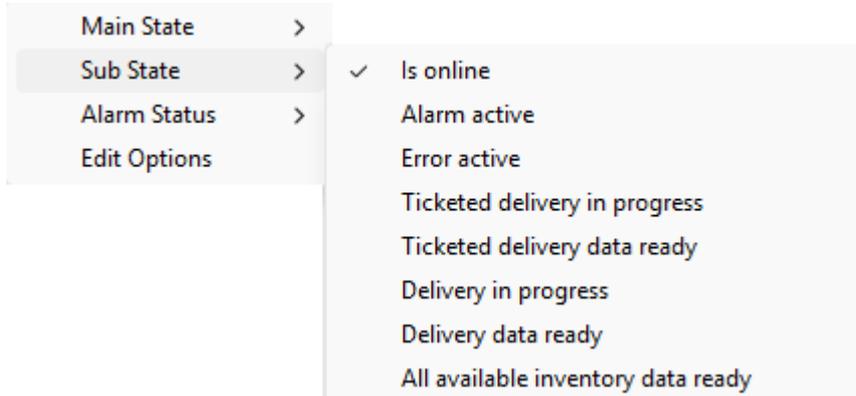
Quick Status Update

Users can quickly change the state of the tank by right-clicking anywhere on the control to open the context menu.

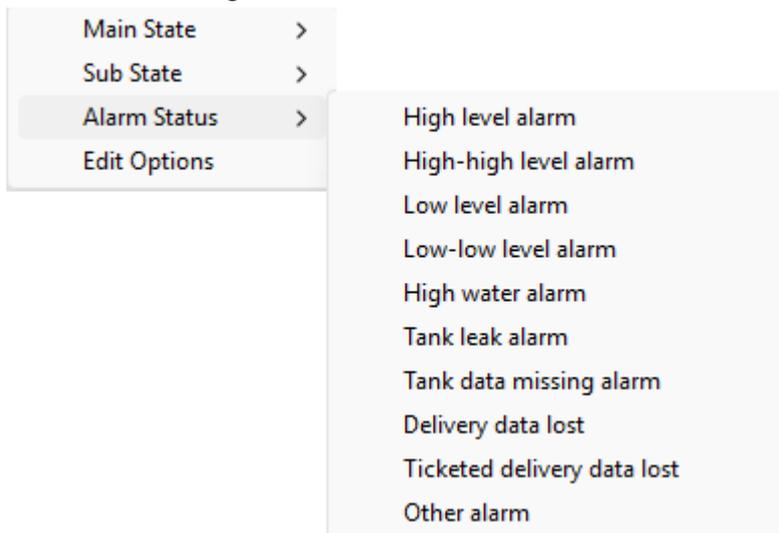
An elaborate menu will pop up, allowing you to easily change the main state,



set or unset a flag for the substate,



set or unset a flag for the alarm status,

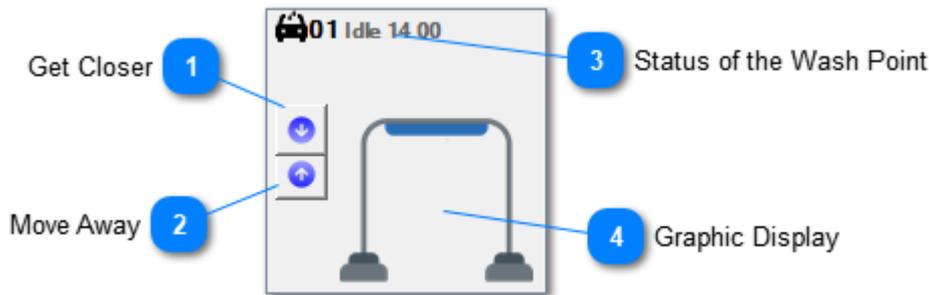


or open a common dialog to update all configuration parameters by clicking on "Edit Options."

Wash Control

The wash point control is the main component of wash control. This control allows you to simulate the car wash and adjust the wash point's status as desired.

This control has two buttons that regulate the position of the car in relation to the car wash. The car may not be present, be in front or behind the car wash, or be in the correct place for washing.



1 Get Closer



Pressing this button will bring the car closer to you. If the car is not present in the car wash pressing the button will put the car in the position in front of the car wash.

2 Move Away



Pressing this button will move the car away from you. If the car is not present in the car wash pressing the button will put the car in the position in front behind car wash.

3 Status of the Wash Point

Idle 14.00

This is indicator of the current status and substate of the car wash

4 Graphic Display



This panel represents the car position related to the car wash, as well as the current washing state. The steps needed to make a car wash in EmuPSS are explained in a separate chapter.

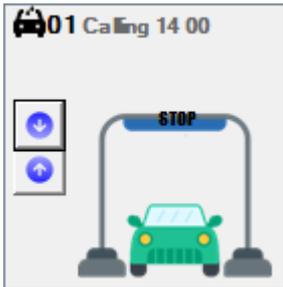
Car Wash

Car Positioning

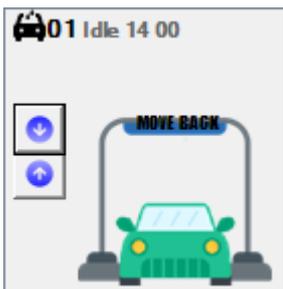
By repeatedly pressing the upper button (get closer), the following changes occur in the state of the car wash.



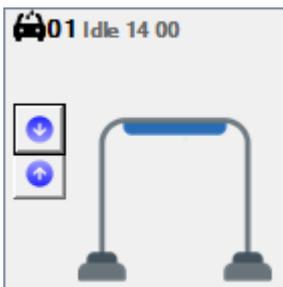
The car appears in front of the car wash, the state of the car wash point is unchanged



With the next click it gets into the correct position for washing and the status of the car wash changes to "Calling".



With the next click the car is behind the car wash and the status returns to "Idle".



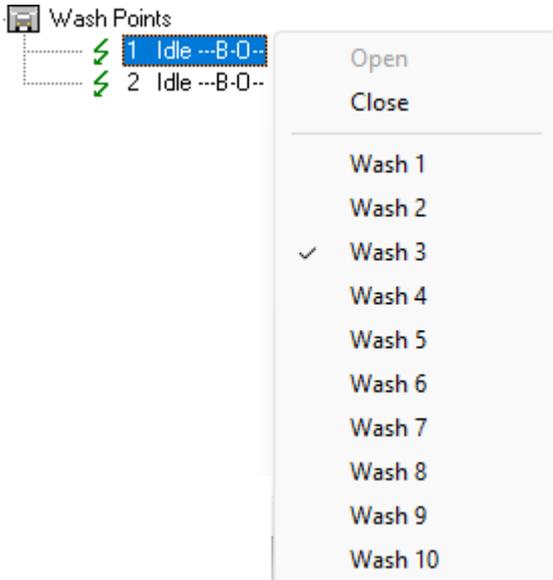
The next click on the same button causes the car to disappear.

By repeatedly pressing the lower button (move away), the same changes will happen but in the opposite direction.

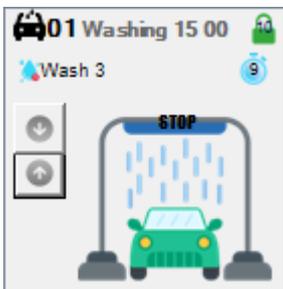
The washing didn't start because the wash point was not preauthorized.

Authorizing Car Wash

The car wash can be authorized through the Demo POS program. A washing program can also be selected.



First, the washing program is selected, and then the car wash is authorized with the same button as the fuelling point.



When wash point is authorized and car is correctly positioned after 3 seconds the washing will start. During the washing process, the buttons are disabled, you can't move the car. The stopwach up-right shows time in seconds left (on the image it is 9).

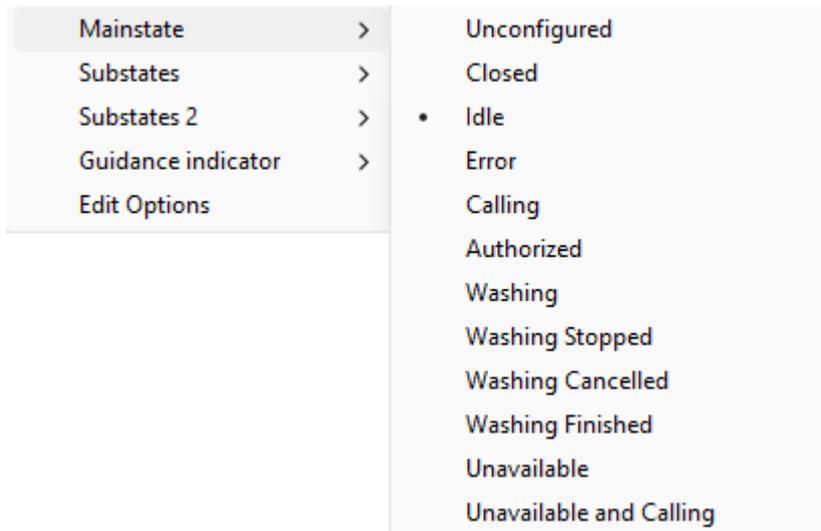


When the time runs out the washing is done and the state is updated accordingly. The buttons are enabled again and you can move the car away.

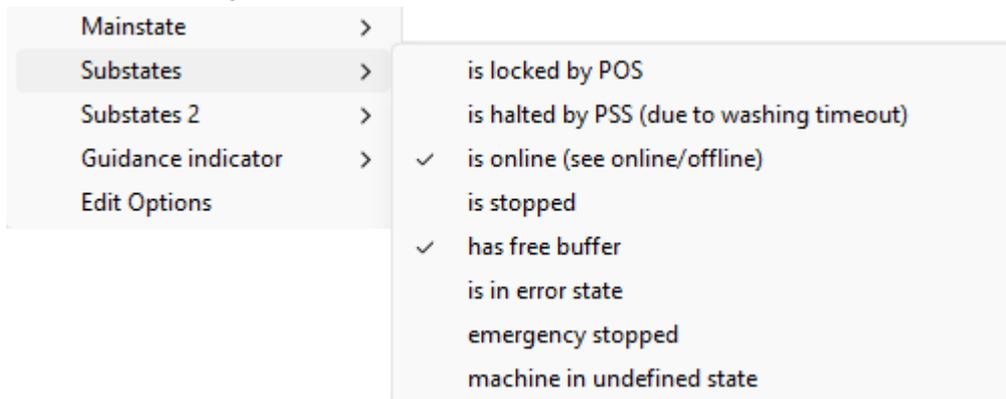
Quick Status Update

Users can quickly change the state of the wash point by right-clicking anywhere on the control to open the context menu.

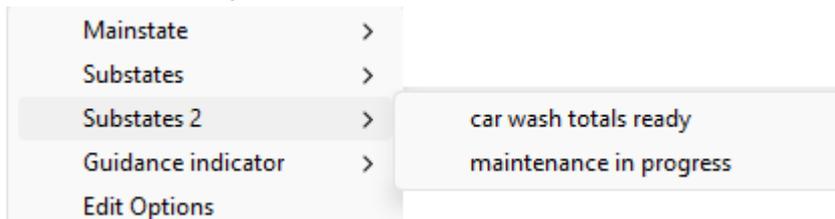
An elaborate menu will pop up, allowing you to easily change the main state,



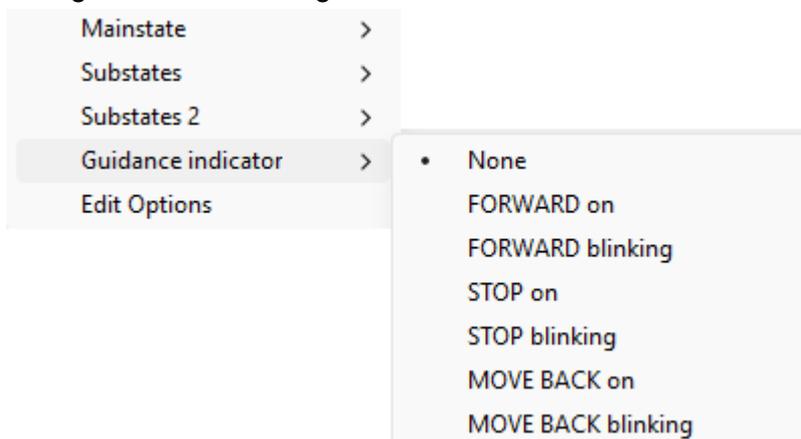
set or unset a flag for the substate,



set or unset a flag for the substate 2,



change the state of the guidance indicator,

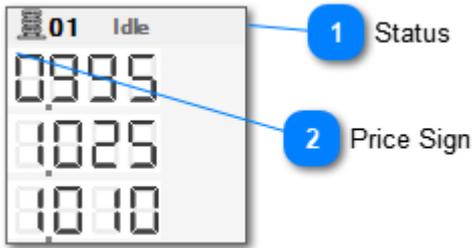


or open a common dialog to update all configuration parameters by clicking on "Edit Options."

Price Display Control

The price pole control is the main component of price display control. This control allows you simulate operation of the price pole and monitor its status.

This control has no control options other than state change.



1 Status

Idle

Current status indicator

2 Price Sign

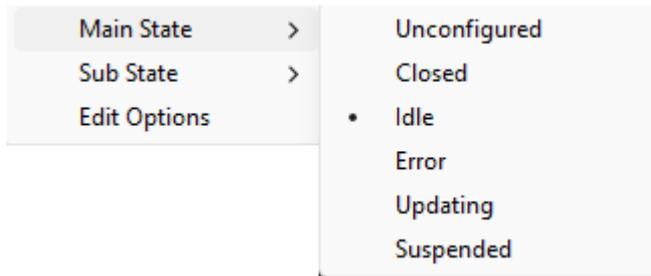
0999

Price Sign for the grade and price group defined in the configuration of the price pole.

Quick State Update

Users can quickly change the state of the price pole by right-clicking anywhere on the control to open the context menu.

An elaborate menu will pop up, allowing you to easily change the main state,



set or unset a flag for the substate,



or open a common dialog to update all configuration parameters by clicking on "Edit Options."

Payment Control

The EPT control is the main component of payment control. This control allows you to simulate operation of the EPT and monitor its status.

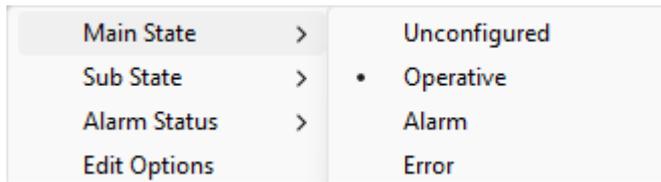
This control has no control options other than state change.



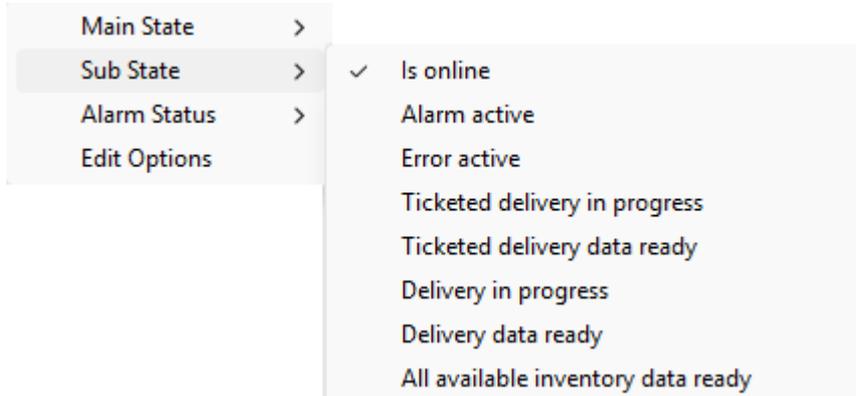
Quick State Update

Users can quickly change the state of the tank by right-clicking anywhere on the control to open the context menu.

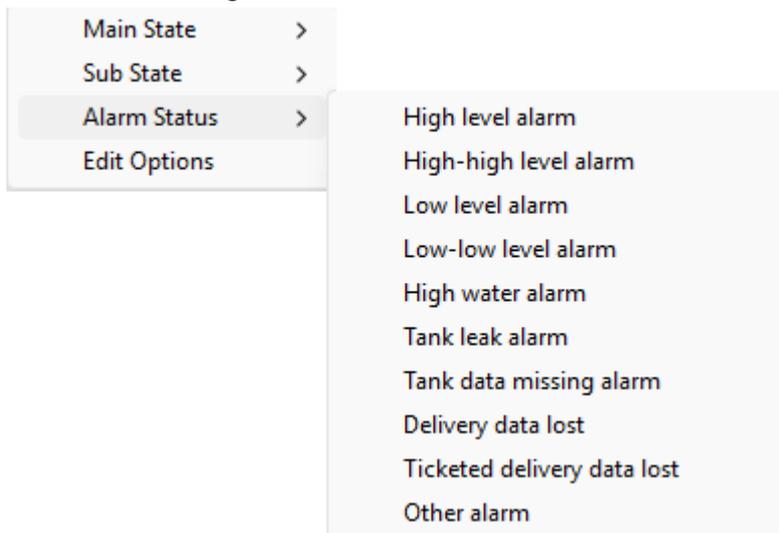
An elaborate menu will pop up, allowing you to easily change the main state,



set or unset a flag for the substate,



set or unset a flag for the alarm status,



or open a common dialog to update all configuration parameters by clicking on "Edit Options."