

VEGA Inventory System - REST Interface

Version: 1.4.2

Last update: 06.09.2021

1. API Documentation

This document is a general guide for the REST interface to get information from the VEGA Inventory System (VIS). An auto-generated documentation is available as a Swagger Documentation via the below link. To access this, you need to be logged in as a valid User, i.e. not a demo account.

Link:

<https://vis.vega.com/api/swagger/index.html>



VEGA Inventory System API

This is the auto-generated documentation for the VEGA Inventory System API. A general guide to this API is available as an separate document.

Created by VEGA Grieshaber KG
 See more at www.vega.com
[Contact the developer](#)

Device	Show/Hide	List Operations	Expand Operations
PlantOperator	Show/Hide	List Operations	Expand Operations
Point	Show/Hide	List Operations	Expand Operations
Values	Show/Hide	List Operations	Expand Operations

[BASE URL: /api , API VERSION: v1]

2. Authentication

To get data, you first have to authenticate and obtain a token.

The URL to obtain the token is: <https://vis.vega.com/api/token>

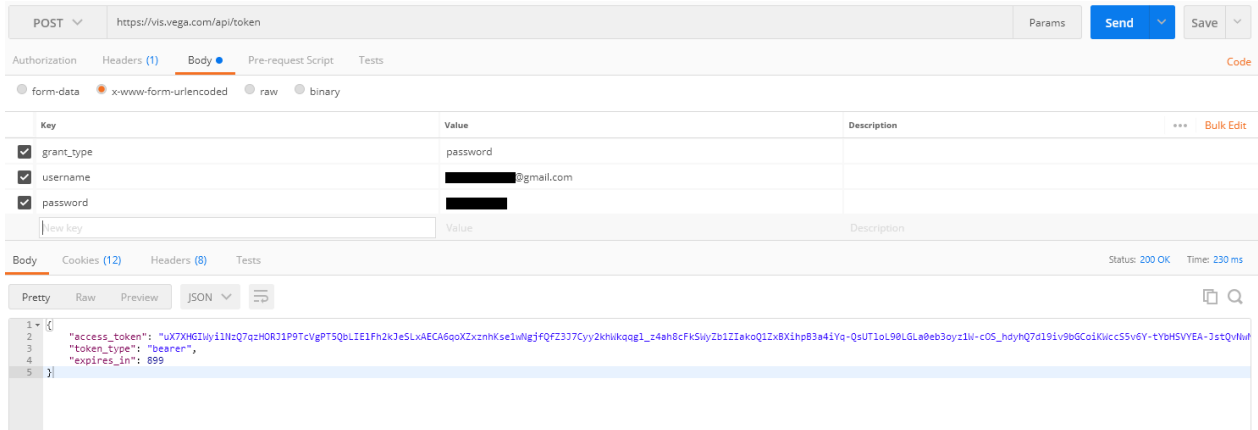
This token needs to be sent with every subsequent request.

This handler needs to be called with a POST-Request with the "Content-Type" Header „application/x-www-form-urlencoded“ and the parameters:

```
grant_type=password
username=<Username>
```

password=<password>

In Postman, a request looks as follows:



As a result, you get the “*access_token*”, the “*token_type*” and the expiry time “*expires_in*”. In our case, the token will expire in 899 seconds.

For the subsequent requests, you need to add the “*access_type*” and “*access_token*” in the “Authorization” Header of your request. They are written after each other separated by a blank space:

```
--header 'Authorization: bearer pfqmWF6VQ5ac0f-Xt9V7IraJ1gRsHxQtDwQVttnJfcH4Tc2BfnkfeLhjZi9ssfnyJdneLi8qursVKg1rHjXPJRqfne7h51PZQ_PZzTuDAd8mUfY15TN8h9MSKrz6V1Hez6NIphiYAsGF1z99UhVgfLbp7fG6mG1FNK1-fXPT606wrBcL5yD20Y06prJGdtFPTq26xHYukPeo5C0sr6EuNiOLx_g'
```

3. Data Request

The most common task is to get the latest measured value of a tank/silo. Therefore, you have to use the “Values” Request. To get data from all tanks/silos, set the parameter “*pointQuery*” to “*all*”, “*timeQuery*” to “*latest*” and “*unitQuery*” to “*2*”.

The unit query defines which values from the Inventory System you get. Usually, the “Scaled” value will be preferred as it represents the scaled level with respective unit of measure/system unit. E.g. Tons.

The three parameters can also be used to get a specific tank/silo, historical data or other values. This is also described in the Swagger Documentation.

An example call in “cURL” looks as follows:

```
curl -X GET --header 'Accept: application/json' --header 'Authorization: bearer pfqmWF6VQ5ac0f-Xt9V7IraJ1gRsHxQtDwQVmttnJfqH4Te2BfnkfeLhjZi9ssfnyJdneLi8qursVKg1rHjXPJRqfne7h51PZQ_PZzTuDAd8mUfY15TN8h9MSKrz9P1Hez6NIphiYAsGF1z99UhVgfLbp7fG6mG1FNK1-fXPT606wrBcL5yD20Y06prJGdtFPTq26xxYukPeo5C0sr6EuNiOLx_g' 'https://vis.vega.com/api/Values/all/latest/2'
```

4. Example Data

The result from the request from section 3 is in the following format. If the result of the request contains data from more than one tank/silo, then it comes as one list.

```

1.  {
2.    „MeasuringConfigs“: [
3.      {
4.        „Min“: 0,
5.        „Max“: 20000,
6.        „Unit“: „l“,
7.        „Type“: 2,
8.        „Values“: [
9.          {
10.           „Timestamp“: „2017-07-19T18:00:00“,
11.           „Value“: 5457,
12.           „State“: „0“,
13.           „IsValid“: true
14.         }
15.       ]
16.     }
17.   ],
18.   „LoopNumber“: 1,
19.   „Id“: 3004,
20.   „DeviceId“: 1613,
21.   „Tag“: „TAG-No. 1“,
22.   „Name“: „TD-MET624“,
23.   „PointInfo1Value“: null,
24.   „PointInfo2Value“: null,
25.   „PointInfo3Value“: null,
26.   „PointInfo4Value“: null,
27.   „ProductName“: „Petrol E10“,
28.   „ProductNumber“: „“,
29.   „Limits“: {
30.     „LoLimitsActive“: true,
31.     „LoLo“: 10,
32.     „Lo“: 20,
33.     „HiLimitsActive“: false,
34.     „Hi“: 60,
35.     „HiHi“: 80,
36.     „Hysteresis“: 0,
37.     „Unit“: „l“
38.   }
39. },

```

4	Min is the minimum value of the level measurement. This parameter is configured in the VEGA field device.
5	Max is the maximum value of the level measurement. This parameter is configured in the VEGA field device.
6	Unit is the unit of measure or system unit. This parameter is configured in the VEGA field device.

7	<p>Type is the type of the measured value that is transmitted: Percent = 0, LinPercent = 1, Scaled = 2, Physical = 3, EmptyVolume = 5 “Percent” is a normal percentage value. “LinPercent” is Linearized Percent (This is for applications where a linearization curve for the tank/silo geometry has been programmed in the VEGA field device). “Scaled” is the scaled volume or mass of the tank/silo contents. “Physical” is the raw sensor value. E.g. Value with system unit mA, bar, psi, m, ft, etc. “EmptyVolume” is the calculated free capacity in the tank/silo (Max. Value minus Actual Level). This parameter is configured in the VEGA field device.</p>
10	<p>Timestamp is the local date and time of the data transmission that was last received from the VEGA field device.</p>
11	<p>Value is the actual level value or last known level value at the time of the last received data transmission.</p>
12	<p>State is the error code delivered by a VEGA field device in case of a device error.</p>
13	<p>IsValid defines if the data from the VEGA field device is current or not.</p>
18	<p>LoopNumber is the number of an output channel (measurement loop) of a VEGA field device. A VEGA field device can have 1, 2 or 15 input and output channels, depending on the model. An output from a measuring sensor is assigned to an output channel (measurement loop) for the data transmission to VIS. The “LoopNumber” is displayed automatically, depending on the assignment in the VEGA field device.</p>
19	<p>ID is the internal identification number for the measurement point (field sensor). It can be used to query further information related to a specific measurement point.</p>
20	<p>DeviceId is the internal identification number for the VEGA field device. It can be used to query further information related to a specific field device.</p>
21	<p>Tag is a user-defined TAG Name that identifies the VEGA field device. This parameter is configured in the VEGA field device.</p>
22	<p>Name is a user-defined name for the VEGA field device. It can be the same as the TAG Name or some other identifier. This parameter is configured in the VIS portal.</p>
23-26	<p>PointInfo1Value to PointInfo4Value are additional user-defined information fields that can be assigned to a particular VEGA field device. For example, Plant ID, Plant Area or other useful descriptor. These parameters are configured in the VIS portal.</p>
27	<p>ProductName is the name of a specific product or material. This parameter is configured in the VIS portal.</p>
28	<p>ProductNumber is an additional identifier for the product or material. This parameter is configured in the VIS portal.</p>
29	<p>Limits refers to programmable level alerts. E.g. re-order point or high level alert. These parameters are configured in the VIS portal.</p>
30	<p>LoLimitsActive when True the Lo and LoLo alerts are active. When false, the alerts are inactive.</p>
31	<p>LoLo is the limit value for the LoLo alert.</p>
32	<p>Lo is the limit value for the Lo alert.</p>

33	HiLimitsActive when True the Hi and HiHi alerts are active. When false, the alerts are inactive.
34	Hi is the limit value for the Hi alert.
35	HiHi is the limit value for the Hi alert.
36	Hysteresis is a definable value applied to all limit values as to avoid false triggers of the alert.
37	Unit is the unit of measure or system unit applied to all the limit values.