

Adding Items to the HWDB Through the Web UI

Agenda

This presentation will cover:

- Finding and selecting Component Type
 - Changing the Datasheet for a Component Type
 - Working with YAML
 - Viewing Datasheet history (Spec Log)
 - Adding Images to a Component Type
 - Linking Component Types
 - Adding Test Types to Component Types
 - Adding Items for a Component Type
 - Specifications & Subcomponents
 - Bulk Adding Items
 - Adding Tests to Items
 - Adding Images to Items
- Review from Day 1
- Component Types
- Items
-
- The diagram shows the agenda items grouped into three sections. The first section, enclosed in a red dotted box, includes the first four items. The second section, enclosed in a purple dotted box, includes the remaining items. Arrows point from the text labels to the corresponding sections: 'Review from Day 1' points to the first section, 'Component Types' points to the second section, and 'Items' points to the sub-items of the third section.

Type id, eid, and cid

Just a reminder:

type id: The first 4 fields of the PID

D/I/L/P	001-999	001-999	00001-99999
Project	System ID	Subsystem ID	Component Type ID

eid: The first 5 fields of the PID

D/I/L/P	001-999	001-999	00001-99999	-	00001-99999
Project	System ID	Subsystem ID	Component Type ID	Dash	Item Number

cid: The first 7 fields of the PID

D/I/L/P	001-999	001-999	00001-99999	-	00001-99999	-	AA-ZZ	001-999
Project	System ID	Subsystem ID	Component Type ID	Dash	Item Number	Dash	Country of Origin	Responsible Institution ID

Database Entry Workflow

1. An architect creates **Component Types** in the HWDB based on **PID templates you provide.**

2. **Administrators complete those created Component Types.** ← Day 1

3. **Ordinary users can start to enter Items.** ← Today

In this presentation, we will cover entering Items through the **Web UI.**

After this presentation, Hajime will cover entering Items through the **REST API.**

HWDB Web UI

For the most part, entering Items with the Web UI is self-explanatory and intuitive.

HOWEVER, there are a few catches here and there! Particularly, there is a non-intuitive step involved in linking Items.

(This is just a heads-up for ADHD people like me who tend to tune out during presentations when something seems too obvious!)

HWDB Web UI

The development database is located at:

<https://dbweb0.fnal.gov/cdbdev/login/sso>

The production database is located at:

<https://dbweb0.fnal.gov/cdb/login/sso>

Adding a Test Type

- Content

DUNE Hardware DB

Component Types

Type name	Category	Test Types	Items	Comments	Created	Creator	Part_type_id
Z.Sandbox.VMP.Box1x1x1	generic	<input type="checkbox"/>	<input type="checkbox"/>	Yet another box to test	2021-04-07 16:13:45-05	Vladimir Podstavkov	Z00100200035
Z.Sandbox.VMP.Box1x1x2	generic	<input type="checkbox"/>	<input type="checkbox"/>	Box 1x1x2 feet	2021-04-07 17:37:37-05	Vladimir Podstavkov	Z00100200036
Z.Sandbox.VMP.Cable_LEMO-LEMO	cable	<input type="checkbox"/>	<input type="checkbox"/>	Testing the cables	2020-10-23 17:01:21-05	Vladimir Podstavkov	Z00100200030
Z.Sandbox.Sandbox.CPA	generic	<input type="checkbox"/>	<input type="checkbox"/>	a placeholder for the entire CPA	2020-10-23 10:27:32-05	Hajime Muramatsu	Z00100100001
Z.Sandbox.Sandbox.CPA_FC	generic	<input type="checkbox"/>	<input type="checkbox"/>		2021-08-14 12:59:47-05	Hajime Muramatsu	Z00100100044
Z.Sandbox.Sandbox.CPA_Panel_Center_PD2	generic	<input type="checkbox"/>	<input type="checkbox"/>		2021-12-22 10:16:21-06	Hajime Muramatsu	Z00100100135
Z.Sandbox.Sandbox.CPA_Panel_DS_PD2	generic	<input type="checkbox"/>	<input type="checkbox"/>		2021-12-22 10:17:54-06	Hajime Muramatsu	Z00100100136
Z.Sandbox.Sandbox.CPA_Panels	generic	<input type="checkbox"/>	<input type="checkbox"/>		2021-08-14 10:17:54-06	Hajime Muramatsu	Z00100100042 0.9.4

DUNE Hardware DB

Component Types

Apply filters

Name:

Category:

Comments:

Creator:

Part_type:

SEARCH CANCEL

Type name	Category	Test Types	Items	Comments	Created	Creator	Part_type_id
Z.Sandbox.VM...					2021-04-07 13:45-	Vladimir Podstavkov	Z00100200035
Z.Sandbox.VM...					2021-04-07 27:37-	Vladimir Podstavkov	Z00100200036
Z.Sandbox.VMP.Cable_LEMO-LEMO	cable	<input type="checkbox"/>	<input type="checkbox"/>	testing the cables	2020-10-23 17:01:21-05	Vladimir Podstavkov	Z00100200030
Z.Sandbox.VM...	generic	<input type="checkbox"/>	<input type="checkbox"/>	a placeholder for the entire CPA	2020-10-23 10:27:32-05	Hajime Muramatsu	Z00100100001
Z.Sandbox.VM...	generic	<input type="checkbox"/>	<input type="checkbox"/>		2021-08-14 12:59:47-05	Hajime Muramatsu	Z00100100044
Z.Sandbox.VM...	generic	<input type="checkbox"/>	<input type="checkbox"/>		2021-12-22 10:16:21-06	Hajime Muramatsu	Z00100100135
Z.Sandbox.VM...	generic	<input type="checkbox"/>	<input type="checkbox"/>		2021-12-22 10:17:54-06	Hajime Muramatsu	Z00100100136
Z.Sandbox.VM...	generic	<input type="checkbox"/>	<input type="checkbox"/>		2021-08-14 10:17:54-06	Hajime Muramatsu	Z00100100042 0.9.4

DUNE Hardware DB

ADD NEW TEST TYPE FOR TEST_PARTS_3...

Test name	Item tests	Comments	Created	Creator
Test_Parts_3_TestType	<input type="checkbox"/>		2022-04-19 10:17:00-05	Hajime Muramatsu
Test_Parts_3_TestType_2	<input type="checkbox"/>	Testing...	2022-04-22 15:07:07-05	Hajime Muramatsu
Test_Parts_3_TestType_3	<input type="checkbox"/>	Testing...	2022-04-22 15:49:13-05	Hajime Muramatsu

Finding and Selecting Component Type

Click “Component Types” from the left menu.

There may be too much data to find your Component Type easily. Click the “FILTER...” button reduce the amount of data shown. Enter filter criteria as desired and click “SEARCH”

You should now be looking at a filtered list of Component Types. From here, you will be able to add Items.

But first, let’s take a quick look at the Component Type to make sure it’s set up the way we want. Click on the name of the Component Type in the list.

Hardware DB Component Types

Home < Previous Next >

Batches

Cable Structures

Component Types **FILTER...**

Items

Geographic Locations

Images

Manufacturers

Purchase Orders

Structures

Admin <

Logout

Type name	Category	Test Types	Items	Comments	Created	Creator	Part_type_id
Z.Sandbox.VMP.Box1x1x1	generic			Yet another box to test	2021-04-07 16:13:45-	Vladimir Podstavkov	Z00100200035
Z.Sandbox.VMP.Box1x1x2	generic						
Z.Sandbox.VMP.Cable_LEMO-LEMO	cable						
Z.Sandbox.Sandbox.CPA	generic						
Z.Sandbox.Sandbox.CPA_FC	generic						
Z.Sandbox.Sandbox.CPA_Panel_Center_PD2	generic						
Z.Sandbox.Sandbox.CPA_Panel_DS_PD2	generic						
Z.Sandbox.Sandbox.CPA_Panels	generic						
Z.Sandbox.Sandbox.CPA_Panel_US_PD2	generic						
Z.Sandbox.Sandbox.CPA_Parts	generic						
Z.Sandbox.Sandbox.CPA_Parts_ARRod	generic						

Apply filters

Name

Category

Comments

Creator

Part_type

SEARCH CANCEL

Hardware DB Component Types

Home < Previous Next >

Batches

Cable Structures

Component Types **FILTER...**

Items

Geographic Locations

Images

Manufacturers

Purchase Orders

Structures

Admin <

Logout

Type name	Category	Test Types	Items	Comments	Created	Creator	Part_type_id
Z.Sandbox.Sandbox.Test_Parts_1	generic			Testing...	2022-04-25 19:26:37-05	Hajime Muramatsu	Z00100100048
Z.Sandbox.VMP.Test_Parts_2	generic				2021-10-15 15:08:12-05	Vladimir Podstavkov	Z00100200037
Z.Sandbox.Sandbox.Test_Parts_3	generic				2022-04-21 17:49:42-05	Hajime Muramatsu	Z00100100046
Z.Sandbox.Sandbox.Test_Parts_4	generic				2021-10-16 15:21:59-05	Hajime Muramatsu	Z00100100045
Z.Sandbox.Sandbox.Test_Parts_5	generic				2021-11-04 16:58:23-05	Hajime Muramatsu	Z00100100049

Component Type — Datasheet

The two items of particular note in the Edit Component Type screen are **Specifications** and **Connectors**. Let's first look at **Specifications**:

In **Specifications**, you are able to define a **Datasheet** for your Component Type. This text field accepts a subset of valid **YAML**.

In general, the **YAML** it will accept is anything that can logically be converted back and forth to **JSON**. In fact, in the **REST API**, this must be submitted as **JSON** instead of **YAML**.

DUVE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Home | Edit Component Type

Batches | SPECS LOG | IMAGES

Cable Structures | Type Name: Test_Parts_3

Component Types | Type ID: 00046

Items | Full Name: Z.Sandbox.Sandbox.Test_Parts_3

Geographic Locations | Part Type ID: Z00100100046

Images | Comments:

Manufacturers | Category: generic

Purchase Orders | Managed by: x type-manager

Structures | Manufacturers: x Hajime Inc

Admin < | Created: 2022-04-21 17:49:42

Logout | Created by: Hajime Muramatsu

Specifications

Version	2
Created	2022-04-19 10:07:28-05:00
Created by	Hajime Muramatsu
Datasheet	AR: [] Gain: - T1 - T2 Size: null Type: null

Connectors

select a type + 🗑️

SAVE DONE

Version: 0.9.4

YAML

- Originally “Yet Another Markup Language”
- Now “YAML Ain’t Markup Language”
- Specification is widely available
- Wikipedia has a pretty good summary
- Notes about web interface:
 - Web interface will attempt to validate the YAML you put in “Datasheet”
 - If it is unable to validate, it will return an error page. Use the back button to go to the previous screen to fix your YAML
 - Not all YAML features are available
 - Web interface will not save your original input. It will save its own representation of your input after validation
 - Complex data is permitted, but it will be flattened into a single drop-down selection box when you enter an Item using your data sheet

YAML

- Here's some sample input and what it will save after validation:

```
Array: [[0, 1], [2, 3]]
Name: null
Size: null
Type: null
data: >
  There once was a tall man from Ealing
  Who got on a bus to Darjeeling
  It said on the door
  "Please don't sit on the floor"
  So he carefully sat on the ceiling
Color:
- Red
- Green
- Blue
Flavor: [Chocolate, Vanilla, Strawberry]
Dictionary: {name: John Smith, age: 33}
Nested:
- Dictionary: {name: Fred Flintstone, age: 15303}
- Array: [10, 20, {value: 30, comment: hello}]
```

```
Name: null
Size: null
Type: null
data: "There once was a tall man from Ealing Who got on a bus to Darjeeling\n
It\
 \ said on the door\n  \"Please don't sit on the floor\"\nSo he carefully sat on\
 \ the ceiling\n"
Array:
- - 0
  - 1
- - 2
  - 3
Color:
- Red
- Green
- Blue
Flavor:
- Chocolate
- Vanilla
- Strawberry
Nested:
- Dictionary:
  age: 15303
  name: Fred Flintstone
- Array:
  - 10
  - 20
  - value: 30
  comment: hello
Dictionary:
age: 33
name: John Smith
```

If you enter this

This is what you'll see
after you save

Component Type — Specs Log

You can view the history of your specification data by clicking the **SPECS LOG** button on the Edit Component Type screen.

The image shows two screenshots from the DUNE Hardware DB application. The top screenshot is the 'Edit Component Type' page for 'Test_Parts_3'. A red dashed arrow points from the 'SPECS LOG' button in the top navigation bar to the 'Specification history' table in the bottom screenshot.

Top Screenshot: Edit Component Type

- Buttons: SPECS LOG, IMAGES
- Fields: Type Name (Test_Parts_3), Type ID (00046), Full Name (Z.Sandbox.Sandbox.Test_Parts_3), Part Type ID (Z00100100046), Category (generic), Managed by (x type-manager), Manufacturers (x Hajime Inc), Created (2022-04-21 17:49:42), Created by (Hajime Muramatsu), Version (2), Created (2022-04-19 10:07:28-05:00)

Bottom Screenshot: Specification history for Test_Parts_3

Created	Creator	Version	Datasheet
2022-04-29 11:06:33-05:00	Alexander Wagner	12	Name: null Size: null Type: null data: "There once was a tall man from Ealing\nWho got on a bus to Darjeeling\n \n \ It said on the door\n \ "Please don't sit on the floor"\nSo he carefully sat\n \ on the ceiling\n" Array: null Color: - Red - Green - Blue Flavor: - Chocolate - Vanilla - Strawberry Nested: - Dictionary: age: 15303 name: Fred Flintstone - Array: - 10 - 20 - value: 30 comment: hello Dictionary: age: 33 name: John Smith
2022-04-29 11:01:36-05:00	Alexander Wagner	11	Name: null Size: null Type: null data: "There once was a tall man from Ealing\nWho got on a bus to Darjeeling\n \n \ It said on the door\n \ "Please don't sit on the floor"\nSo he carefully sat\n \ on the ceiling\n"

Component Type — Images

You can view Images associated with your Component Type by clicking the **IMAGES** button on the Edit Component Type screen.

You may add new Images by clicking the **ADD NEW...** button.

The **FILTER** button is available if you have many images and want to look for a particular subset of Images by name.

Consider carefully whether you want to add images to the Component Type or to individual Items instead!

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Home | SPECS LOG | **IMAGES**

Edit Component Type

Component Types

- Type Name: Test_Parts_3
- Type ID: 00046
- Full Name: Z.Sandbox.Sandbox.Test_Parts_3
- Part Type ID: Z00100100046
- Comments:
- Category: generic
- Managed by: x type-manager
- Manufacturers: x Hajime Inc
- Created: 2022-04-21 17:49:42
- Created by: Hajime Muramatsu
- Specifications
- Version: 2
- Created: 2022-04-19 10:07:28-05:00
- Created by: Hajime Muramatsu

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Home | Images

Images

< Previous

For Component Type: [Test_Parts_3](#)

[ADD NEW...](#) [FILTER...](#)

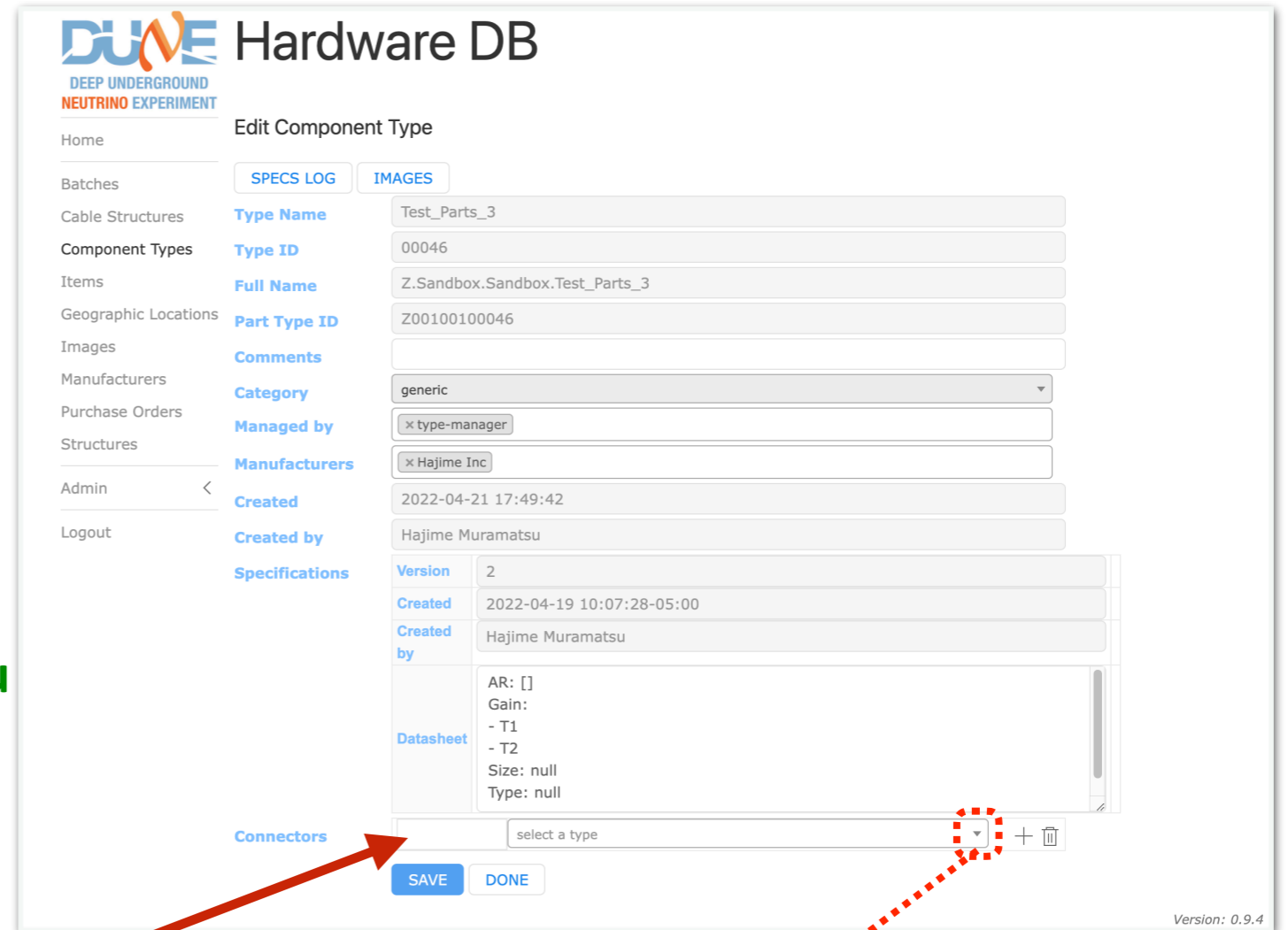
Image_name	Library	Item	Comments	Created	Image	Creator
sisyphus.png	type	Test_Parts_3		2022-04-29 08:13:16-05		Alexander Wagner

Component Type — Connectors

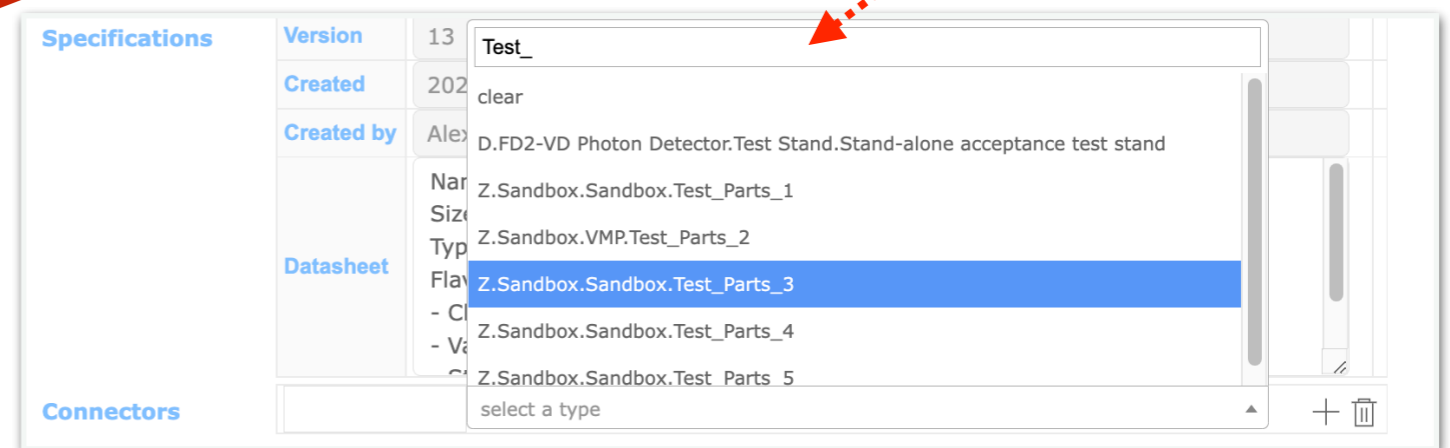
If no Connectors are currently defined, there will automatically be one drop-down list you can use to select a Connector.

To add Connectors, click on the '+' button to the right of the Connectors section.

When you expand the drop-down list, you will need to enter a few characters of the Component Type name in order to thin out the list.



Functional Position
Enter some text here describing the relationship of the connecting component type to this component type



Component Type — Connectors

After selecting your connectors and clicking **SAVE**, the Component Type name will be replaced by the Type ID.

DUWE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Home Edit Component Type

Batches SPECS LOG IMAGES

Cable Structures

Component Types **Type Name** Test_Parts_3

Items **Type ID** 00046

Geographic Locations **Full Name** Z.Sandbox.Sandbox.Test_Parts_3

Images **Part Type ID** Z00100100046

Manufacturers **Comments**

Purchase Orders **Category** generic

Structures **Managed by** × type-manager

Admin < **Manufacturers** × Hajime Inc

Logout **Created** 2022-05-17 08:15:38

Created by Alexander Wagner

Specifications

Version	13
Created	2022-05-17 07:58:00-05:00
Created by	Alexander Wagner

Datasheet

Name: null
Size: null
Type: null
Flavor:
- Chocolate
- Vanilla

Connectors

Left Doodad	Z00100100045	+ 🗑️
Right Doodad	Z00100100049	+ 🗑️

SAVE **DONE**

Component Type — Test Types

To enter Test Types for your Component Type, go back to the Component Types screen and click the folder icon for Test Types.

You may add a new Test Type by clicking the ADD NEW TEST TYPE FOR <TYPE NAME>... button.

The Test Type has a Datasheet using the same YAML format as the Component Type's Datasheet.

You may also edit an existing Test Type. For existing Test Types, you may view the history of the specification for that test by clicking SPECS LOG.

The image shows three overlapping screenshots of the DUNE Hardware DB interface. The top screenshot shows the 'Component Types' page with a table of entries. A red dashed circle highlights a folder icon in the 'Test Types' column, with a red arrow pointing to it. The middle screenshot shows the 'ADD NEW TEST TYPE FOR TEST_PARTS_3...' button highlighted with a red dashed box. The bottom screenshot shows the 'Edit Item Test Type' form with fields for Test Name, Component Type, Comments, and a Datasheet containing a list of test specifications.

Type name	Category	Test Types	Items	Comments	Created	Creator	Part_type_id
D.FD2-VD Photon Detector.Test Stand.Stand-alone acceptance test stand	generic	[Folder Icon]	[Folder Icon]	None	2022-05-04 14:16:34-05	Vladimir Podstavkov	D05800600001
Z.Sandbox.Sandbox.Test_Parts_1	generic	[Folder Icon]	[Folder Icon]	Testing...	2022-05-11 10:56:55-05	Hajime Muramatsu	Z00100100048
Z.Sandbox.VMP.Test_Parts_2	generic	[Folder Icon]	[Folder Icon]		2021-10-15 15:08:12-05	Vladimir Podstavkov	Z00100200037
Z.Sandbox.Sandbox.Test_Parts_3	generic	[Folder Icon]	[Folder Icon]		2022-04-29 11:06:33-05	Alexander Wagner	Z00100100046
Z.Sandbox.Sandbox.Test_Parts_4	generic	[Folder Icon]	[Folder Icon]		2022-05-06 05:20:20-05	Hajime Muramatsu	Z00100100045

Test name	Item tests	Comments	Created	Creator
Test_Parts_3_TestType	[Folder Icon]		2022-04-19 10:17:00-05	Hajime Muramatsu
Test_Parts_3_TestType_2	[Folder Icon]	Testing...	2022-04-22 15:07:07-05	Hajime Muramatsu
Test_Parts_3_TestType	[Folder Icon]	Testing...	2022-04-22 15:49:13-05	Hajime Muramatsu

Edit Item Test Type Form (from bottom screenshot):

- SPECS LOG
- Test Name: [Empty]
- Component Type: Test_Parts_3
- Comments: Sledgehammer Test
- Created: [Empty]
- Created by: [Empty]
- Specifications: [Empty]
- Version: [Empty]
- Created: [Empty]
- Created by: [Empty]
- Datasheet:


```
Sledgehammer Test:
- nothing happens
- small dent
- large dent
- breaks
```
- Buttons: SAVE, DONE

Adding Items

We should now be ready to add Items. Return to the **Component Types** screen and click the folder icon in the Items column for your **Component Type**.

You will now be looking at a list of all Items for that **Component Type**. You may use the **FILTER...** button to select a subset of these Items.

Click **ADD NEW <Type Name>...** to add a new Item.

The image shows two screenshots of the DUNE Hardware DB web application. The top screenshot is the 'Component Types' page, and the bottom screenshot is the 'Items' page. A red dashed arrow points from the folder icon in the 'Items' column of the top table to the 'ADD NEW TEST_PARTS_3...' button in the bottom screenshot.

Component Types Screenshot:

Type name	Category	Test Types	Items	Comments	Created	Creator	Part_type_id
Z.Sandbox.Sandbox.Test_Parts_1	generic			Testing...	2022-04-25 19:26:37-05	Hajime Muramatsu	Z00100100048
Z.Sandbox.VMP.Test_Parts_2	generic				2021-10-15 15:08:12-05	Vladimir Podstavkov	Z00100200037
Z.Sandbox.Sandbox.Test_Parts_3	generic				2022-04-21 17:49:42-05	Hajime Muramatsu	Z00100100046
Z.Sandbox.Sandbox.Test_Parts_4	generic				2021-10-16 15:21:59-05	Hajime Muramatsu	Z00100100045
Z.Sandbox.Sandbox.Test_Parts_5	generic				2021-11-04 16:58:23-05	Hajime Muramatsu	Z00100100049

Items Screenshot:

Id	Part_id	Serial_number	Manufacturer_id	Batch_id	Creator	Created
6464	Z00100100046-00029	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:11.328489-05:00
6463	Z00100100046-00028	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:11.328489-05:00
6462	Z00100100046-00027	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:11.328489-05:00
6461	Z00100100046-00026	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:11.328489-05:00
6465	Z00100100046-00030	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6456	Z00100100046-00021	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6459	Z00100100046-00024	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6458	Z00100100046-00023	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6457	Z00100100046-00022	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6460	Z00100100046-00025	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6455	Z00100100046-00020	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6446	Z00100100046-00011	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6447	Z00100100046-00012	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6448	Z00100100046-00013	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6449	Z00100100046-00014	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6451	Z00100100046-00016	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6452	Z00100100046-00017	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6453	Z00100100046-00018	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6454	Z00100100046-00019	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6450	Z00100100046-00015	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6445	Z00100100046-00010		Hajime Inc		Alexander Wagner	2022-04-29 07:53:35.399959-05:00
6444	Z00100100046-00009		Hajime Inc		Alexander Wagner	2022-04-29 07:50:32.392778-05:00
6429	Z00100100046-00008		Hajime Inc		Hajime Muramatsu	2022-04-22 08:45:54.011992-05:00
6405	Z00100100046-00007		Hajime Inc		Hajime Muramatsu	2022-04-18 13:03:16.893055-05:00
6404	Z00100100046-00006		Hajime Inc		Hajime Muramatsu	2022-04-18 12:59:26.900609-05:00
5650	Z00100100046-00005		Hajime Inc	1237	Hajime Muramatsu	2021-11-04 16:39:00.924105-05:00
5647	Z00100100046-00004		Hajime Inc	1237	Hajime Muramatsu	2021-11-04 07:59:26.001260-05:00
5632	Z00100100046-00003		Hajime Inc	1237	Hajime Muramatsu	2021-10-20 16:29:58.155999-05:00
5630	Z00100100046-00002		Hajime Inc	1237	Hajime Muramatsu	2021-10-16 16:58:32.084509-05:00
5627	Z00100100046-00001		Hajime Inc	1237	Hajime Muramatsu	2021-10-16 15:24:23.408625-05:00

Adding Items

Enter the Country of Origin, Resp. Institution, and Manufacturer for this Item. Batch ID is unused here.

Click on the '+' next to the Specifications area. The area will expand and show whatever fields you previously.

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Home Edit Item

Batches **Component Type** Z.Sandbox.Sandbox.Test_Parts_3

Cable Structures **Part ID** Z00100100046-00031

Component Types **Serial Number**

Items **Country of Origin** United States

Geographic Locations **Resp. Institution** University of Minnesota Twin Cities

Images **Manufacturer** Hajime Inc

Manufacturers **Batch ID** --SELECT--

Purchase Orders **Created**

Structures **Created by**

Admin < **Contained in** N/A

Logout **Specifications**

Sub-components

SAVE DONE

Specifications

Name	Bob
Size	Large
Type	Gluten-Free
Flavor	Strawberry

Items — Adding Sub-Components

Now let's add Sub-components to this Item.

Click on the '+' to the right of Sub-components. The area will expand and show...

OOPS!

At this point, there is nothing for the Web UI to display! We defined the Sub-component structure for the Component Type, but we need actual Items available to be added!

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Home Edit Item

Batches **Component Type** Z.Sandbox.Sandbox.Test_Parts_3

Cable Structures **Part ID** Z00100100046-00031

Component Types **Serial Number**

Items **Country of Origin** United States

Geographic Locations **Resp. Institution** University of Minnesota Twin Cities

Images **Manufacturer** Hajime Inc

Manufacturers **Batch ID** --SELECT--

Purchase Orders **Created**

Structures **Created by**

Admin < **Contained in** N/A

Logout **Specifications**

Sub-components +

SAVE DONE

Sub-components -

Items — Adding Sub-Components

Let's go back to the Component Type List page and add new Items to be used as Sub-Components.

Keep track of the Part ID for these new Items. You'll need them later.

Hardware DB

Component Types

Type name	Category	Test Types	Items	Comments	Created	Creator	Part_Type_id
D.FD2-VD Photon Detector.Test Stand.Stand-alone acceptance test stand	generic			None	2022-05-04 14:16:34-05	Vladimir Podstavkov	D05800600001
Z.Sandbox.Sandbox.Test_Parts_1	generic			Testing...	2022-05-11 10:56:55-05	Hajime Muramatsu	Z00100100048
Z.Sandbox.VMP.Test_Parts_2	generic				2021-10-15 15:08:12-05	Vladimir Podstavkov	Z00100200037
Z.Sandbox.Sandbox.Test_Parts_3	generic				2022-05-17 08:15:38-05	Alexander Wagner	Z00100100046
Z.Sandbox.Sandbox.Test_Parts_4	generic				2022-05-06 05:30:39-05	Hajime Muramatsu	Z00100100045
Z.Sandbox.Sandbox.Test_Parts_5	generic				2021-11-04 16:58:23-05	Hajime Muramatsu	Z00100100049

Hardware DB

Items

Id	Part_id	Serial_number	Manufacturer_id	Batch_id	Creator	Created
6427	Z00100100045-00013	None	Hajime Inc		Hajime Muramatsu	2022-04-21 17:53:35.183765-05:00
6428	Z00100100045-00014	None	Hajime Inc		Hajime Muramatsu	2022-04-21 17:53:35.183765-05:00
6426	Z00100100045-00012	None	Hajime Inc		Hajime Muramatsu	2022-04-21 17:53:35.183765-05:00
6424	Z00100100045-00010	None	Hajime Inc		Hajime Muramatsu	2022-04-21 17:53:26.360565-05:00

Hardware DB

Items

Id	Part_id	Serial_number	Manufacturer_id	Batch_id	Creator	Created
6475	Z00100100049-00011	None	Hajime Inc		Alexander Wagner	2022-04-29 08:40:11.669556-05:00
6466	Z00100100049-00002	None	Hajime Inc		Alexander Wagner	2022-04-29 08:40:11.669556-05:00
6467	Z00100100049-00003	None	Hajime Inc		Alexander Wagner	2022-04-29 08:40:11.669556-05:00

Hardware DB

Edit Item

Component Type: Z.Sandbox.Sandbox.Test_Parts_4

Part ID: Z00100100045-00015

Serial Number:

Country of Origin: United States

Resp. Institution: University of Minnesota Twin Cities

Manufacturer: Hajime Inc

Batch ID: --SELECT--

Created:

Created by:

Contained in: N/A

Specifications

Test_A: 333

Test_B: 444

Sub-components

SAVE DONE

Hardware DB

Edit Item

Component Type: Z.Sandbox.Sandbox.Test_Parts_5

Part ID: Z00100100049-00012

Serial Number:

Country of Origin: United States

Resp. Institution: University of Colorado Boulder

Manufacturer: Hajime Inc

Batch ID: --SELECT--

Created:

Created by:

Contained in: N/A

Specifications

Color: Green

Sub-components

SAVE DONE

Items — Adding Sub-Components, 2nd Try

Now let's try again to add **Sub-components** to this Item.

Repeat the earlier steps to create a new item. Fill in the fields as needed, including under **Specifications**.

Click on the '+' to the right of **Sub-components**. The area will expand and show...

OOPS!

There is a little extra non-intuitive step involved here.

The screenshot shows the 'Hardware DB' 'Edit Item' form. The left sidebar contains navigation links: Home, Batches, Cable Structures, Component Types, Items, Geographic Locations, Images, Manufacturers, Purchase Orders, Structures, Admin, and Logout. The main form area has the following fields:

- Component Type: Z.Sandbox.Sandbox.Test_Parts_3
- Part ID: Z00100100046-00031
- Serial Number: (empty)
- Country of Origin: United States
- Resp. Institution: University of Minnesota Twin Cities
- Manufacturer: Hajime Inc
- Batch ID: --SELECT--
- Created: (empty)
- Created by: (empty)
- Contained in: N/A

Below these fields are sections for 'Specifications' and 'Sub-components'. A '+' icon is located to the right of the 'Sub-components' section.

The screenshot shows the expanded 'Sub-components' section, which is a header bar with the text 'Sub-components' and a minus sign on the right.

Preparing Sub-components

Go find the Item for one of your Sub-components, using the Part ID you recorded earlier.

Note that the Edit screen now has an additional set of buttons towards the top. Click **STRUCTURE LOG**.

DUNE Hardware DB

Component Types

Type name	Category	Test Types	Items	Comments	Created	Creator	Part_type_id
D_FD2-VD Photon Detector:Test Stand:Stand-alone acceptance test stand	generic			None	2022-05-04 14:16:34-05	Vladimir Podstavkov	D05800600001
Z.Sandbox.Sandbox.Test_Parts_1	generic			Testing...	2022-05-11 10:56:55-05	Hajime Muramatsu	Z00100100048
Z.Sandbox.VMP.Test_Parts_2	generic				2021-10-15 15:08:12-05	Vladimir Podstavkov	Z00100200037
Z.Sandbox.Sandbox.Test_Parts_3	generic				2022-05-17 08:15:38-05	Alexander Wagner	Z00100100046
Z.Sandbox.Sandbox.Test_Parts_4	generic				2022-05-06 05:30:39-05	Hajime Muramatsu	Z00100100045
Z.Sandbox.Sandbox.Test_Parts_5	generic				2021-11-04 16:58:23-05	Hajime Muramatsu	Z00100100049

DUNE Hardware DB

Items

Id	Part_id	Serial_number	Manufacturer_id	Batch_id	Creator	Created
6649	Z00100100045-00015		Hajime Inc		Alexander Wagner	2022-05-19 08:52:53.834341-05:00
6427	Z00100100045-00015	None	Hajime Inc		Hajime Muramatsu	2022-04-21 17:53:35.183765-05:00
6426	Z00100100045-00012		Hajime Inc		Hajime Muramatsu	2022-04-21 17:53:35.183765-05:00
6428	Z00100100045-00014	None	Hajime Inc		Hajime Muramatsu	2022-04-21 17:53:35.183765-05:00
6425	Z00100100045-00011	None	Hajime Inc		Hajime Muramatsu	2022-04-21 17:53:26.360565-05:00
6423	Z00100100045-00009	None	Hajime Inc		Hajime Muramatsu	2022-04-21 17:53:26.360565-05:00

DUNE Hardware DB

Edit Item Z00100100045-00015

QR SPECS LOG **STRUCTURE LOG** CONTAINER LOG TEST LOG IMAGES

Component Type: Z.Sandbox.Sandbox.Test_Parts_4

Part ID: Z00100100045-00015-US186

Serial Number:

Country of Origin: United States

Resp. Institution: University of Minnesota Twin Cities

Manufacturer: Hajime Inc

Batch ID: --SELECT--

Created: 2022-05-19 08:52:53

Created by: Alexander Wagner

Contained in: N/A

Specifications

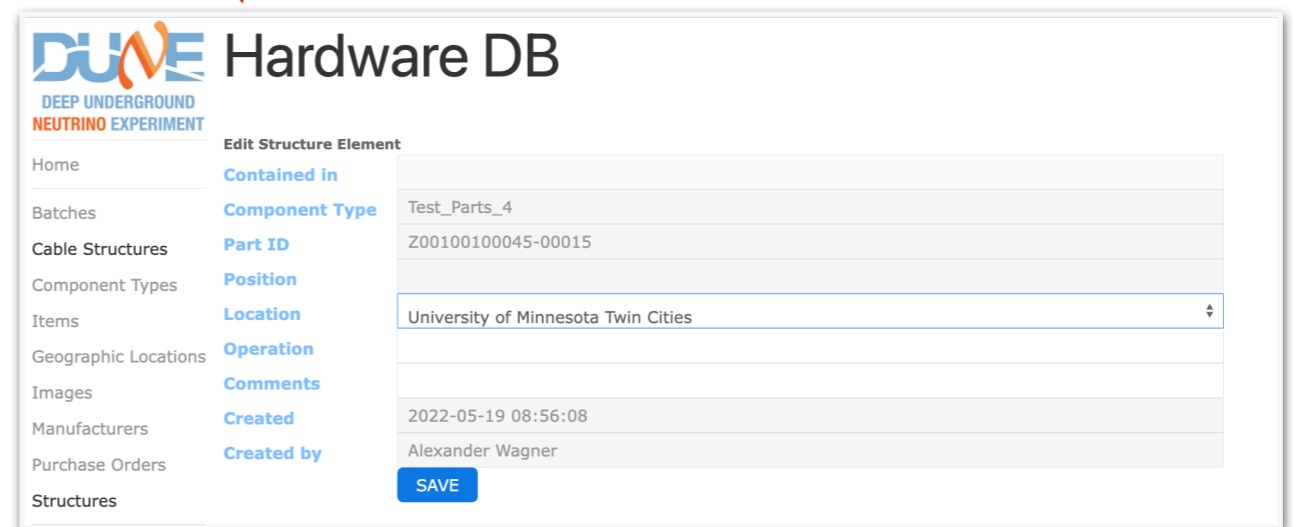
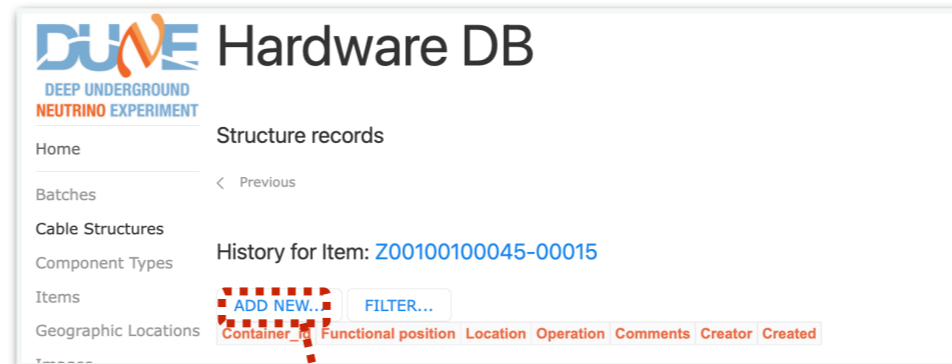
Sub-components

SAVE DONE

Preparing Sub-components

Click **ADD NEW...** . Select a **Location** and (optional) enter text for **Operation** and **Comments**.

Repeat these steps for however many **Items** as needed.



Repeat steps for the Test_Parts_5 item as well

Items — Adding Sub-Components, 3rd Try

Now let's try one last time to add Sub-components to this Item.

Repeat the earlier steps to create a new item. Fill in the fields as needed, including under Specifications.

Click on the '+' to the right of Sub-components. The area will expand and show...

YAY! Now we can add some Sub-components!

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Home Edit Item

Batches **Component Type** Z.Sandbox.Sandbox.Test_Parts_3

Cable Structures **Part ID** Z00100100046-00031

Component Types **Serial Number**

Items **Country of Origin** United States

Geographic Locations **Resp. Institution** University of Minnesota Twin Cities

Images **Manufacturer** Hajime Inc

Manufacturers **Batch ID** --SELECT--

Purchase Orders **Created**

Structures **Created by**

Admin < **Contained in** N/A

Logout **Specifications**

Sub-components

SAVE DONE

Sub-components

Left Doodad:Test_Parts_4

Right Doodad:Test_Parts_5

SAVE DONE

Items — Adding Sub-Components

Click the drop-down arrow for one of your Sub-components.

You'll see a message saying "Please enter 2 or more characters." The last few digits of your item number recorded earlier will work well here.

Select the correct Item from the list.

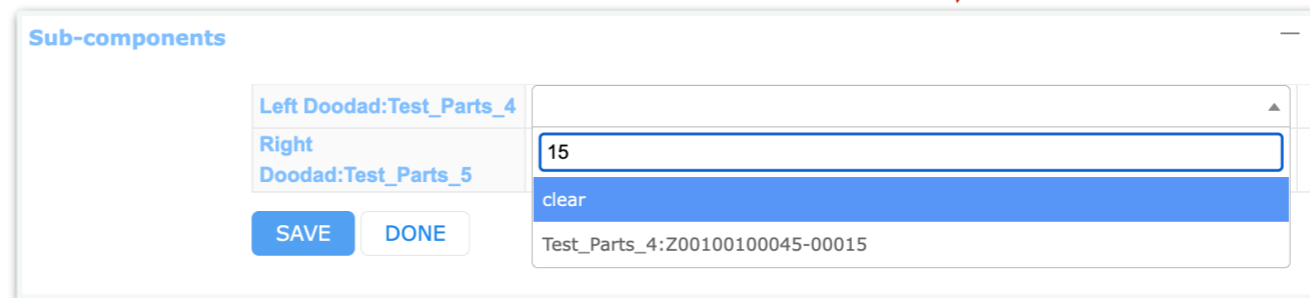
Repeat for as many Sub-components as you have defined for this Item's Component Type.



The screenshot shows a 'Sub-components' form with two input fields. The first field is labeled 'Left Doodad:Test_Parts_4' and the second is labeled 'Right Doodad:Test_Parts_5'. A red dashed circle highlights the drop-down arrow on the right side of the first input field. Below the fields are 'SAVE' and 'DONE' buttons.



The screenshot shows the same 'Sub-components' form. The first input field now contains the text 'Please enter 2 or more characters'. A red dashed box highlights the error message. The second input field is empty. 'SAVE' and 'DONE' buttons are visible below.



The screenshot shows the 'Sub-components' form with the dropdown menu for the first input field open. The menu contains the text '15', 'clear', and 'Test_Parts_4:Z00100100045-00015'. The '15' option is highlighted. 'SAVE' and 'DONE' buttons are visible below.

Items — Bulk Add

Note that from the Items List screen, you may also Bulk Add items.

This may be preferable because it will use the same Country, Institution, and Manufacturer for all Items, so you don't need to add them individually.

Hardware DB

Items

Id	Part_id	Serial_number	Manufacturer_id	Batch_id	Creator	Created
6645	Z00100100046-00031	None	Hajime Inc		Alexander Wagner	2022-05-19 08:46:47.867752-05:00
6463	Z00100100046-00028	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:11.328489-05:00
6462	Z00100100046-00027	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:11.328489-05:00
6461	Z00100100046-00026	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:11.328489-05:00
6465	Z00100100046-00030	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:11.328489-05:00
6464	Z00100100046-00029	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:11.328489-05:00
6459	Z00100100046-00024	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6458	Z00100100046-00023	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6457	Z00100100046-00022	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6456	Z00100100046-00021	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6460	Z00100100046-00025	None	Hajime Inc		Alexander Wagner	2022-04-29 07:55:04.767654-05:00
6451	Z00100100046-00016	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6446	Z00100100046-00011	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6447	Z00100100046-00012	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6448	Z00100100046-00013	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6449	Z00100100046-00014	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6450	Z00100100046-00015	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00
6452	Z00100100046-00017	None	Hajime Inc		Alexander Wagner	2022-04-29 07:54:21.325439-05:00

Hardware DB

Item Bulk Add

Component Type: Z.Sandbox.Sandbox.Test_Parts_3

Country of Origin: United States

Resp. Institution: University of Minnesota Twin Cities

Manufacturer: Hajime Inc

Part IDs: Z00100100046-00032...

Count:

SAVE DONE

Items — Tests

You may add Tests by clicking **TEST LOG** on the Edit Item screen.

Click **ADD NEW TEST...**, then select the **Test Type** you defined earlier.

Enter the data for your **Test**.

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Edit Item Z00100100046-00031

Home | QR | SPECS LOG | STRUCTURE LOG | CONTAINER LOG | **TEST LOG** | IMAGES

Component Type: Z.Sandbox.Sandbox.Test_Parts_3
Part ID: Z00100100046-00031-US186
Serial Number:
Country of Origin: United States
Resp. Institution: University of Minnesota Twin C
Manufacturer: Hajime Inc
Batch ID: --SELECT--
Created: 2022-05-19 08:46:47
Created by: Alexander Wagner
Contained in: N/A

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Test history for Z00100100046-00031

Home | Batches | **ADD NEW TEST...** | Test_type_id | Created | Creator | Test_data | Comments

Available Tests

- Test_Parts_3_TestType:
- Test_Parts_3_TestType_2: Testing...
- **Test_Parts_3_TestType_3: Testing...**

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Edit Test for Z00100100046-00031

Component Type: Test_Parts_3
Test Type: Test_Parts_3_TestType
Comments:
Created:
Created by:
Test Results:
Pass: --SELECT--
MyValue: 0

SAVE DONE

Items — Images

You may add Images by clicking **IMAGES** on the Edit Item screen.

Click on **ADD NEW...** to add a new Item.

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Edit Item Z00100100046-00031

Home | **QR** | SPECS LOG | STRUCTURE LOG | CONTAINER LOG | TEST LOG | **IMAGES**

Component Type: Z.Sandbox.Sandbox.Test_Parts_3
Part ID: Z00100100046-00031-US186
Serial Number:
Country of Origin: United States
Resp. Institution: University of Minnesota Twin Cities
Manufacturer: Hajime Inc
Batch ID: --SELECT--
Created: 2022-05-19 08:46:47
Created by: Alexander Wagner
Contained in: N/A
Specifications

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Home | Images

Batches < Previous

For Item: Z00100100046-00031

ADD NEW... FILTER...

Image_name Library Item Comments Created Image Creator

Items — QR/Bar Codes

You may view the QR code for an Item by clicking QR on the Edit Item screen.

You may view the bar code for an Item by clicking the link icon to the right of the Part ID field.

DUNE Hardware DB
DEEP UNDERGROUND NEUTRINO EXPERIMENT

Edit Item Z00100100046-00031

Home | **QR** | SPECS LOG | STRUCTURE LOG | CONTAINER LOG | TEST LOG | IMAGES

Batches

Cable Structures

Component Types

Items

Geographic Locations

Images

Manufacturers

Purchase Orders

Structures

Admin <

Logout

Requests, Issues? ↗

Component Type Z.Sandbox.Sandbox.Test_Parts_3

Part ID Z00100100046-00031-US186

Serial Number

Country of Origin United States

Resp. Institution University of Minnesota Twin Cities

Manufacturer Hajime Inc

Batch ID --SELECT--

Created 2022-05-19 08:46:47

Created by Alexander Wagner

Contained in N/A

Specifications

Sub-components

SAVE DONE



QR/Bar

Adding Items Through the WEB UI

This covers the basics for using the WEB UI. I hope this presentation has been useful!

Thank you for your attention and time!