Data types

All different data types will be shown in this page

> **ATTENTION**
>
> To see a more up to date version of the different data types pleas see `src/bolinho_api/classes.py` !

DataPoint

Python

```python
class DataPoint:
    def __init__(self, x=0, y=0):
        self.x = x
        self.y = y
```

- `x` : Position at the mesure moment
  - type: `float`
  - Unity: `mm`
- `y` : Force at the mesure moment
  - Type: `float`
  - Unity: `N`

Material

Python

```python
class Material:
    def __init__(
        self,
        id=0,
        name="NONE",
        batch="",
        supplier_name="",
        supplier_contact_info="",
        extra_info="",
    ):
        self.id = id
        self.name = name
        self.batch = batch
        self.supplier_name = supplier_name
        self.supplier_contact_info = supplier_contact_info
        self.extra_info = extra_info
```

- `id` :
  - type: `int`
  - Unity: N/A
- `name` :
  - type: `string`
  - Unity: N/A
- `batch` :
  - type: `string`
  - Unity: N/A
- `supplier_name` :
  - type: `string`
  - Unity: N/A
- `supplier_contact_info` :
  - type: `string`
  - Unity: N/A
- `extra_info` :
  - type: `string`
  - Unity: N/A

Body

Python

```python
class Body:
    def __init__(
        self,
        id=0,
        type=1,
        material=Material(
            id=0,
            name="Base Material",
            batch="",
            supplier_name="",
            supplier_contact_info="",
            extra_info="",
        ),
        param_a=0,
        param_b=0,
        height=0,
        extra_info="",
    ):
        self.id = id
        self.type = type
        self.material = material
        self.param_a = param_a
        self.param_b = param_b
        self.height = height
        self.extra_info = extra_info
```

- `id` :
  - Type: `int`
  - Unity: N/A
- `type` : Body format * 1 = Rectangle * 2 = Cylinder * 3 = Tube * 4 = Other * Type: `int` * Unity: N/A
- `material` :
  - Type: `Material`
  - Unity: N/A
- `param_a` : Param 'a' of the body
  - Rectangle = length
  - Cylinder = External diameter
  - Tube = External diameter
  - Type: `float`
  - Unity: `mm`
- `param_b` : Param 'b' of the body
  - Rectangle = depth
  - Cylinder = NULL
  - Tube = Internal diameter
  - Type: `float`

    - Unity: `mm`
- `height` : Height of the test body
    - Type: `float`
    - Unity: `mm`
- `extra_info` :
    - type: `string`
    - Unity: N/A

Experiment

Python

```python
class Experiment:
    def __init__(
        self,
        id=0,
        name="None",
        body: Body = Body(
            id=0,
            type=1,
            material=Material(
                name="Material",
                batch="Batch",
                supplier_name="",
                supplier_contact_info="",
                extra_info="",
            ),
            param_a=0,
            param_b=0,
            height=0,
            extra_info="",
        ),
        date_time=0,
        load_loss_limit=0,
        max_load=0,
        max_travel=0,
        max_time=0,
        z_axis_speed=0,
        compress=False,
        extra_info="",
        plot_color="#ffffff",
    ):
        self.id = id
        self.name = name
        self.body = body
        self.date_time = date_time
        self.load_loss_limit = load_loss_limit
        self.max_load = max_load
        self.max_travel = max_travel
        self.max_time = max_time
        self.z_axis_speed = z_axis_speed
        self.compress = compress
        self.extra_info = extra_info
        self.plot_color = plot_color
```

- `id` :
  - Type: `int`
  - Unity: N/A
- `name` :
  - type: `string`
  - Unity: N/A
- `body` :
  - Type: `Body`
  - Unity: N/A

- `date_time` : Date and time formatted as `dd/mm/yyyy`
  - Type: `string`
  - Unity: N/A
- `load_loss_limit` : Max load loss to trigger auto-stop.
  - Type: `float`
  - Unity: `N/s`
- `max_load` : Max load limit to trigger auto-stop.
  - Type: `float`
  - Unity: `N`
- `max_travel` : Max distance the experiment head can travel during the experiment.
  - Type: `float`
  - Unity: `mm`
- `max_time` : Experiment time limit.
  - Type: `float`
  - Unity: `s`
- `z_axis_speed` :
  - Type: `float`
  - Unity: `mm/s`
- `compress` : Is the experiment type of compression? `false` implies expansion.
  - Type: `bool`
  - Unity: N/A
- `extra_info` :
  - type: `string`
  - Unity: N/A
- `plot_color` : System parameter
  - type: `string`
  - Unity: N/A