# Measurements

## Measurement Log

Measurements with acceleration sensor readings (Partially)  
Weights: 0 kg, 15.3 kg, and 31.0 kg  
  
Calibrate acceleration sensor  
Extend and retract at constant speed  
  
Separator: “;” and Decimal symbol: “.”

## Dynamic Measurements (continuous movement)

|  |  |  |  |
| --- | --- | --- | --- |
| Positions (TCP) | Repetitions | Mass [kg] | Index |
| 0.002–1.24 with v = 250 mm/s | 10 | 0 | ypr\_arduino\_11-41-65 |
| 0.002–1.24 with v = 250 mm/s | 3 | 15.3 (initially applied) | ypr\_arduino\_11-48-98 |
| 0.002–1.24 with v = 250 mm/s | 3 | 31.0 (initially applied) | ypr\_arduino\_11-51-26 |
| 0.002–1.24 with v = 250 mm/s | 3 | 31.0 (initially applied) | ypr\_arduino\_11-53-52 |
| 0.002–1.24 with v = 250 mm/s | 1 | 0 | ypr\_arduino\_13-38-27 |
| 0.002–1.24 with v = 250 mm/s | Several | 15.3 (initially applied) | ypr\_arduino\_13-41-73 |
| 0.002–1.24 with v = 250 mm/s | Several | 0 | ypr\_arduino\_13-55-94 |
| 0.002–1.24 with v = 250 mm/s | Several | 15.3 (initially applied) | ypr\_arduino\_14-02-29 |
| 0.002–1.24 with v = 250 mm/s | Several | 31.0 (initially applied) | ypr\_arduino\_14-10-10 |

## Static Measurements

(Stop at travel points and wait for steady state)

Positions (TCP) [mm]:  
0 – 25 – 50 – 75 – 100 – 200 – 300 – 400 – 500 – 600 – 700 – 800 – 900 – 1000 – 1100 – 1200 – 1240

- 31 kg | ypr\_arduino\_12-13-07

- 15.3 kg | ypr\_arduino\_12-18-51

- 0 kg | ypr\_arduino\_12-24-77

## Static Measurements – Positioning Accuracy

Measurement points: acceleration sensor at TCP  
Width adjustment: to 300 mm (previously 80 mm)  
Positions (TCP) [mm]: 0 – 620 – 1240 – 620 – 0 (with pauses)

- 5 repetitions | 0 kg | ypr\_arduino\_13-32-83

- 5 repetitions | 15.3 kg | ypr\_arduino\_13-33-14

- 5 repetitions | 31 kg | ypr\_arduino\_13-34-09

## Platform Movement

* **Height**: raised up by 200 mm  
  **Runner position**: 1240 mm  
  **Repetitions**: –  
  **Mass**: 0 kg  
  **Index**: ypr\_arduino\_14-14-36
* **Height**: raised up by 200 mm  
  **Runner position**: 0 mm  
  **Repetitions**: –  
  **Mass**: 0 kg  
  **Index**: