Mechatronic system requirements profile

**Contact details:**

|  |  |
| --- | --- |
| Company |  |
| Contact |  |
| Project name / number |  |
| Phone number |  |
| EMail |  |
| JAT contact |  |
| Date |  |

**Application description of the mechatronic system:**

|  |
| --- |
| e.g. intended use, operation processes, special requirements, …: |

**Sketch of the axes’ arrangement (including axis numbering):**

|  |
| --- |
|  |

**Technical system requirements:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Axis | 1 | 2 | 3 | 4 |
| Arrangement (X, Y, Z, D) |  |  |  |  |
| Stroke / rotation angle with overflow |  |  |  |  |
| Maximum axis lentgh (mounting space) |  |  |  |  |
| Velocity |  |  |  |  |
| Acceleration |  |  |  |  |
| Positioning accuracy |  |  |  |  |
| Positioning resolution |  |  |  |  |
| Repeatability |  |  |  |  |
| Straightness deviation in X |  |  |  |  |
| Straightness deviation in X |  |  |  |  |
| Straightness deviation in X |  |  |  |  |
| Sensors or limit switches necessary? |  |  |  |  |
| Holding brake necessary? |  |  |  |  |
| Type of measuring system (Sin/Cos, incremental, absolute [protocol BiSS C, Hiperface, …]) |  |  |  |  |
| Load capacity |  |  |  |  |
| Distance from center of mass to axis |  |  |  |  |
| Forces in opposite directions (e.g. springs) |  |  |  |  |

**Sketch illustrating the definitions (coordinate system required):**



**Ambient / operation conditions of the machine:**

|  |  |
| --- | --- |
| Ambient temperature |  |
| Special ambient conditions (dust, clean room, vibration, x-ray, humidity, …) |  |
| Duty cycle during operation [%](relation between movement and standstill) |  |
| Functional safety (e.g. STO, SLS, …) |  |
| Critical positioning time and stroke |  |
| Minimum life cycle (amount of operations, time or total travel distance) |  |

**Interfaces (mechanical, electrical, control):**

|  |  |
| --- | --- |
| Connection of mechanical interface to basic structure (fully faced or self-supportive) |  |
| Energy chain implemented by the customer? |  |
| Additional cables or tubes (e.g. amount, diameter, dynamic / moving bending radius) |  |
| (Excess) length of cables at energy chain outlet |  |
| Electrical interface connection (e.g. cable with plug to control cabinet, coupling point, …) |  |
| Positioning mode (point-to-point / path) |  |
| Field bus interface (e.g. Profibs, Profinet, EtherCAT, CANopen, …) |  |