

## Purchasing specification – Documentation, directives and standards

For all orders done by igm Robotersysteme AG following specifications are necessary for supplied documentations and for used directives and standards unless other written agreements are made. In any case these following specifications are minimum requirements.

### 1. General

Technical devices and documentations must be realised according to the directive 2006/42/EC (directive on machinery) – if this directive has to be applied.

Furthermore – if applicable – the directive 2006/95/EC (directive relating to electrical equipment designed for use within certain voltage limits) and the directive 2004/108/EC (directive relating to electromagnetic compatibility) are to be considered.

If other (additional) directives have to be applied all documentations have to be realised according to these directives.

### 2. Content of the documentation

The documentation has to include following data (according to MRL 2006/42/EG):

- general description (of the machinery)
- overall drawing(s)
- diagrams
- risk analysis (according EN ISO 12100) (in German or English)
- calculation notes of the safety-related parts of control systems (according to EN ISO 13849-1+2) (in German or English)
- list of the residual risk
- list of used standards and directives
- declaration of conformity (if not partly completed machinery)
- if partly completed machinery:
  - declaration of incorporation
  - assembly instructions (according annex VI)
- instructions, containing at least information of
  - manufacturer
  - designation ( according marking on machinery)
  - indented use
  - warnings concerning experienced misuse
  - protective measures and protective equipment
  - training of operators
  - the use, maintenance and repair of the machinery, checking (particularly with drawings, diagrams, descriptions and explanations
  - transport and storage
  - installation, assembly and connection instructions (particularly with drawings and diagrams)
  - putting into service and use of the machinery
  - adjustment, maintenance operations and maintenance measures
  - troubleshooting
  - specification of the spare parts to be used, when these affect the health and safety of operators
  - the essential characteristics of tools or work pieces which may be fitted to the machinery
  - possible workstations
  - airborne noise emissions and vibrations

### 3. Language of documentation

The instructions have to be delivered in **German** and if required in the **languages** which are indicated in the written **order**.

### 4. Type of documentation

All documentations have to be delivered in any case as **PDF file**, additionally all 3D-Data as **STP file** and all 2D-Data as **DWG file** and if possible in addition as **hardcopy** form.

### 5. Directives and standards

For all orders of igm Robotersysteme AG – if applicable – following directives and standards have to be applied by all means.

Directive 2006/42/EC, directive 2006/95/EC, directive 2004/108/EC;

EN 349, EN 614-1, EN 953, EN ISO 4413, EN ISO 4414, EN 1037, EN 1088, EN ISO 10218-1, EN ISO 11161, EN ISO 12100, EN ISO 13849-1, EN ISO 13849-2, EN ISO 13850, EN ISO 13855, EN ISO 13857, EN 60204-1, EN 60825-1.

Additional directives and/or (particularly harmonized) standards have to be quoted separately.