**Checklist – Machined Parts**

This checklist covers the items that should be confirmed when preparing to release a drawing for custom Machined Parts. Engineers reviewing a drawing should inspect the document for appropriate notations covering the items in the checklist. This list is not exhaustive, and care should be taken to make sure that special features of the part designed are appropriately noted.

The drawing covered by this checklist is a design record for engineering used to communicate the requirements of the part to suppliers for their process control and to your company incoming inspection processes.

## Common Drawing Format Requirements

| Item | Description | Check |
| --- | --- | --- |
| 1.1 | Company Name, Address, Contact Information |  |
| 1.2 | Proprietary Information Statement |  |
| 1.3 | Drawing Title |  |
| 1.4 | Drawing Number |  |
| 1.5 | Revision |  |
| 1.6 | Default Dimensional System (inches / mm) and Tolerances |  |
| 1.7 | Sheet Number and Total Number of Sheets |  |
| 1.8 | Method of Approval |  |
| 1.9 | Projection angle symbol |  |
| 1.10 | Sheet size |  |

## Attachments

| Item | Description | Check |
| --- | --- | --- |
| 2.1 | CAD file (e.g., STEP) appended or zipped to the Electronic Drawing  Is the CAD file the same version as the Drawing? |  |
| 2.2 | Graphics Artwork files appended or zipped to the Electronic Drawing |  |
| 2.3 | Manufacturing specification or workmanship standard document |  |

## Material Specifications

| Item | Description | Check |
| --- | --- | --- |
| 3.2 | Material Type and Grade or Specification |  |
| 3.2 | Material Thickness Dimensions |  |
| 3.3 | Welding information e.g., seams, creases, or butt joints with regard to penetration, filler material, welding process type, welding locations and finish instructions |  |

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## Surface Finish

| Item | Description | Check |
| --- | --- | --- |
| 4.1 | Deburr and Break Sharp Edges  Time-save (sanding)  Tumbling, etc. |  |
| 4.2 | Plating – Nickel, Zinc, etc.  Thickness |  |
| 4.3 | Anodizing  Type or standard, thickness  Color |  |
| 4.4 | Conversion Coating  Clear and colored Chromate |  |
| 4.5 | Painting  Type – Wet, Powder Coat  Color Specification: Color Description, Mfg and Part Number of Paint – or –  Color Standard: RAL, Pantone, Federal Standards  Texture Specification  If custom, consider Paint Chips for matching. |  |
| 4.6 | Silkscreen or Pad Printing information and location. Attach artwork file |  |
| 4.7 | General welding notes |  |

## Bill of Materials

| Item | Description | Check |
| --- | --- | --- |
| 5.1 | For Inserts, Helicoils, Dowel Pins, etc.  Manufacturer, Part Number, Quantity, Reference Designation (location) |  |
| 5.2 | Same information for any other material that may be added at the machining operation. |  |

## Dimensions

| Item | Description | Check |
| --- | --- | --- |
| 6.1 | Identify Critical Dimensions to be checked on Incoming Inspection |  |
| 6.2 | Identify dimensions and tolerances that are tighter than the default tolerances. |  |
| 6.3 | Are tolerances appropriate for fabrication method? |  |
| 6.4 | Dimension and Tolerance Standards and Stack-up |  |
| 6.5 | Part flatness, parallelism, orthogonality, etc. |  |
| 6.6 | Thread Specifications and Fit / Depth |  |
| 6.7 | Surface finish roughness on sealing surfaces or where necessary. |  |

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## Notes

| Item | Description | Check |
| --- | --- | --- |
| 7.1 | RoHS / REACH Compliance base material, coatings, and artwork/ silk-screening |  |
| 7.2 | Default Tolerances for use with attached CAD files. |  |
| 7.3 | Assembly notes |  |
| 7.4 | Mask Areas before plating/anodizing (e.g., threads) |  |
| 7.5 | Dimensions “before” or “after” plating or anodizing |  |
| 7.6 | Drawing Standard (ISO / ANSI) |  |
| 7.7 | Part marking. Part number/ revision/ location |  |