

## Part Drawing Checklist

A comprehensive part drawing review checklist so you can streamline your drawing review process, catch preventable mistakes, and move faster with confidence. Interested in how to catch more issues on drawings before they go to manufacturing? [Check out Five Flute.](#)



### Drawing preparation, title block and sheet structure

- ☐ Check PDF export quality - be sure PDF matches native CAD drawing
- ☐ Drawing title
- ☐ Drawing number and/or part number
- ☐ Company information
- ☐ Company specific boilerplate callouts and general specifications

#### Part information

- ☐ Material
- ☐ Estimated part weight
- ☐ Finishing information

#### Drawing interpretation information such as

- ☐ Measurement units of the drawing (in, mm, cm, etc)
- ☐ Default tolerances for dimension callouts where no tolerance is specified
- ☐ References to relevant drawing standards such as ASME Y14.5

#### Personnel information

- ☐ Created by (drafter or engineer)
- ☐ Checked by
- ☐ Approved by



### Views and geometry communication

- ☐ Include enough views to communicate critical geometry fully
- ☐ Ensure views are scaled appropriately to maximize drawing space
- ☐ Inclusion of isometric view (in full color)
- ☐ Appropriate sections and detailed views for hidden and intricate features
- ☐ Appropriate use of center marks, center lines, hidden lines, & break lines



### Dimensions and tolerances

- ☐ Check for dimensioning of all critical features with inspection in mind
- ☐ Legible dimensioning scheme with no overlapping leaders
- ☐ Inclusion of reference dimensions for quick stock sizing
- ☐ Review hole and thread callouts for appropriate depth and fit specifications
- ☐ No dimensioning hidden lines

#### GD&T

- ☐ Check if datum structure is consistent with part functionality
- ☐ Review each feature control frame for design intent

#### Note inspection dimensions (inspection bubbles or ASME Y14.5 inspection callout)

- ☐ For first articles (FAI)
- ☐ For statistical process control (SPC)
- ☐ Include measurement location and preferred measurement method callouts



### Notes, annotations and revisions

- ☐ Include drawing notes to represent design intent not captured via dimensioning, tolerancing, and other annotations

#### For drawings that accompany a 3D file

- ☐ Ensure 2D is clearly linked to 3D (typically with drawing note)

#### Ensure current revision is called out properly

- ☐ Update revision section in title block
- ☐ Include updated revision table with summary of changes
- ☐ Use revision cloud to highlight subtle feature changes
- ☐ Update notes to indicate the latest CAD file associated with revision
- ☐ Check for visual differences across drawing versions - using a tool like Five Flute or adobe DC



### Functional interfaces

#### Note inspection dimensions (inspection bubbles or ASME Y14.5 inspection callout)

- ☐ Include relevant 'Where used' information
- ☐ Review dimensioning and tolerancing of critical interfaces with other components - .e.g hole pattern on part A, hole pattern on part B, do tolerances make sense for assembly?



### Build your own DFM checklist (examples below)

- ☐ Include manufacturing process specific notes

#### CNC machining

- ☐ Tool access check: internal corners, fillet radii, undercuts
- ☐ Machine-ability: wall thickness, flexible features
- ☐ Fixture-ability: parallel surfaces, softjaw compatability, etc..

#### Sheet metal

- ☐ Include flat pattern
- ☐ Check minimum bend radius
- ☐ Inclusion of bend relief
- ☐ Check for hole distance near bends (2X thickness clearance preferred)

#### Injection molding

- ☐ Draft angle and undercuts check
- ☐ Wall thickness uniformity check
- ☐ Include radii for mold flow (eliminate sharp corners)
- ☐ Include bosses and rib supports where necessary
- ☐ Specify cosmetic requirements



### Mistakes will happen → You need a review process

#### Use Five Flute for reviews

- ☐ Upload your drawings and invite reviewers
- ☐ Capture markups in browser and collaborate on drawing reviews
- ☐ Upload new drawing versions and diff with previous version to track changes
- ☐ Track resolution of markup issues and drawing approvals
- ☐ Build your source of truth for 2D markup and design review history

### Stop printing drawings, Slacking screenshots, or emailing PDFs.

Five Flute puts your drawing review process on autopilot so you can work faster, catch preventable mistakes, and deliver better hardware. You can sign up for a [short demo](#) to learn more.