

GENERAL FOUNDRY STANDARDS

The following are the general standards Waupaca Foundry, Inc. uses for all quotations unless previously agreed to.

- General dimensional tolerances to follow ISO 8062-3-2023. (Grey iron DCTG9)
 (Ductile iron DCTG10) for basic tolerancing. For roundness, parallelism,
 perpendicularity, flatness, and symmetry tolerances ISO 8062-3-2023 (Grey iron –
 GCTG5) (Ductile iron GCTG6).
- 2. Mold shift and/or T.I.R. tolerance of .060" (1.5MM) minimum.
- 3. Minimum machine stock of .118" (3MM) for ductile and grey iron castings.
- **4.** Wall thickness shall follow ISO 8062-3-2023 with a min thickness of 4.57mm (.188") for grey iron and 6.35mm (.25") for ductile iron.
- **5.** Minimum finishing tolerances: Riser gate .090" (2.3MM) measured from parting. Parting lines and in-gates .060" (1.52MM).
- **6.** Surface voids: general acceptance criteria statements, i.e., "casting to be free of defects for as cast and machined surfaces" shall not be acceptable. Standard defect allowances shall be .090" (Grey iron 2.3MM depth and diameter) (Ductile iron 2.3MM depth and no length or width requirement).
- **7.** Ductile iron soundness: allowable level and location, to be determined through solidification modeling and sampling. The final allowable level and location shall be mutually agreed upon.
- **8.** A casting print, which includes the location for the casting ID information and machining locators, should be used for quoting. If not available, we shall have a mutual agreement on cast versus machined requirement notes.
- 9. All casting/machining prints/models shall be shared to ensure proper tooling builds.
- 10. Castings will be packaged according to requirements, leaving our dock rust free and shipped as agreed. If this policy is followed, we shall not accept responsibility for castings received with rust.
- **11.** A master sample shall only be retained until PPAP approval. Customer shall accept tooling movement on equivalent equipment within the same Plant.
- **12.** Customer notification shall not be required for changes in WF production equipment with no change in process flow. An approved warrant implies all requirements are met.
- 13. For gray iron castings only, separately cast ASTM A48 test bars will be removed from their mold at a temperature consistent with the castings they represent once per shift, unless otherwise specified. For ductile iron castings only, a separately cast Y block per ASTM A536 will be poured with the castings they represent, unless otherwise specified.
- **14.** If additional testing and/or inspections are requested once the quote is submitted, Waupaca Foundry, Inc. may request a re-quote.