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EAGLE ALLOY DIMENSIONAL TOLERANCE STANDARDS

The following are the normal tolerances that can be applied to as-cast parts produced from each of the available processes. Any deviation from these guidelines will be considered on a case by case basis. Specific part geometry may require or allow an increase or decrease in tolerance from this standard. Subsequent operations (e.g. grinding, pressing, machining, etc.) may improve tolerances on specific dimensions. Tolerances based on experience and from STEEL CASTINGS HANDBOOK, Steel Founders Society of America.

<u>LINEAR DIMENSIONS - INCH (MM)</u>	<u>SHELL</u>	<u>ISO 8062 (REF)</u>	<u>AIRSET</u>	<u>ISO 8062 (REF)</u>
0" to 6" INCL (0 to 152 INCL)	+/- 0.030" (0.75)	CT8	+/- 0.063" (1.60)	CT10
6" to 12" INCL (152 to 305 INCL)	+/- 0.045" (1.15)	CT9	+/- 0.094" (2.40)	CT11
12" to 18" INCL (305 to 457 INCL)	+/- 0.060" (1.50)	CT9	+/- 0.125" (3.20)	CT11
18" to 24" INCL (457 to 610 INCL)	+/- 0.090" (2.30)	CT10	+/- 0.188" (4.80)	CT12
24" to 30" INCL (610 to 762 INCL)	+/- 0.098" (2.50)	CT10	+/- 0.251" (6.40)	CT12
30" to 36" INCL (762 to 914 INCL)	+/- 0.098" (2.50)	CT10	+/- 0.251" (6.40)	CT12
36" to 44" INCL (914 to 1,118 INCL)	+/- 0.098" (2.50)	CT10	+/- 0.251" (6.40)	CT12

*3D PRINTED MOLD CASTINGS WOULD FOLLOW AIRSET TOLERANCES.

MISC CALLOUTS

ACROSS PARTING LINE-ADD to ABOVE	0.010" (.25)	0.030" (.75)
PATTERN to CORE DIMS-ADD to ABOVE	0.010" (.25)	0.030" (.75)
MISMATCH-COPE to DRAG	+/- 0.020" (.50)	+/- 0.063" (1.60)
GATE/RISER CONTACTS	+/- 0.063" (1.60)	+/- 0.063" (1.60)
RECOMMENDED MINIMUM RADIUS	0.031" (0.75)	0.063" (1.60)
MINIMUM WALL THICKNESS	0.188" (4.76)	0.250" (6.35)

*RECOMMENDED MACHINE STOCK FOR FULL CLEAN-UP IS 1/8" PER SURFACE.

ANGULAR DIMENSIONS (DEGREES)

ALL ANGLES	+/- 1 °	+/- 1 °
DRAFT	1 - 2 °	1 - 2 °

*DO NOT PUT DATUM LOCATING POINTS ON PARTING LINE OR GATE/RISER CONTACTS.

SURFACE FINISHES

SHELL CAST SURFACE FINISH: 150 - 300 RMS

AIRSET CAST SURFACE FINISH: 250 - 560 RMS

3D PRINTED MOLD CAST SURFACE FINISH: 250 - 560 RMS