



ALUMINUM

Castings and Machining

FROM CONCEPT TO CASTING THRU FINAL MACHINING
CAST METALS PROVIDES TECHNICAL SERVICE AT EACH STEP

GENERAL TOLERANCES

Aluminum Sand Castings:

Linear Tolerances

	inches	mm	inches	mm
Basic Tolerance up thru	6.000	150	± 0.030	± 0.8
Additional Tolerance for each additional inch over	6.000	150	± 0.003	± 0.08

Required Draft

	inches	mm	inches	mm
Length of Draw	over 5.000	over 125	3.000 - 5.000	7 - 12
Minimum Amount of Draft	1 deg.	2 deg.	3 deg.	3 deg.

Flatness / Straightness

	inches	mm	inches	mm
Greater Dimension	0 - 6	150	0.030	0.8
Each Additional	1 - 24	25 - 600	0.003 per inch	0.08 per 25 mm

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GENERAL TOLERANCES (continued)

Aluminum Sand Castings:

Hole / Pockets

		Hole Dia. Or depth of Recess											
		inches		mm		inches		mm		inches		mm	
		0.25	6	0.5	12	1	25	2	50	4	100		
		Maximum Depth											
Mold	Solid	Solid	0.5	12	0.75	19	1.5	38	2	50			
Core	Solid	Solid	0.5	12	2	50	4	100	8	200			
		Draft Required per Side											
Mold	-	-	10	10	10	10	7	7	5	5			
Core	-	-	10	10	10	10	7	7	5	5			

Machine Finish Allowance

Greatest Dimension			
Inches	mm	Inches	mm
up thru 6	150	0.06	1.5
Over 6 - 12	150 - 300	0.09	2.3
Over 12 - 18	300 - 450	0.12	3
Over 18 - 24	450 - 600	0.15	3.8
Over 24	600	Consult Foundry	