

# ALUMINUM

## Castings and Machining

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

## HEAT TREAT SPECIFICATIONS

### Aluminum Sand Castings:

#### Descriptions

- F** As cast, cooled to room temperature naturally, no further heat treat processing
- T5** Cooled to room temperature naturally, then artificially aged
- T6** Solution heat treated and artificially aged
- T7** Solution heat treated and over-aged

#### Heat Treatment Details

##### Aluminum Sand Mold Castings

Alloy	Temper	Solution Heat Treat		Aging Treatment	
		Temp.	Time	Temp.	Time
319.0	T5	-	-	400°F	8 hrs
319.0	T6	940°F	12 hrs	310°F	2 - 5 hrs
355.0	T51	-	-	310°F	2 - 5 hrs
355.0	T6	980°F	12 hrs	310°F	3 - 5 hrs
355.0	T7	980°F	12 hrs	440°F	3 - 5 hrs
355.0	T71	980°F	12 hrs	475°F	4 - 6 hrs
C355.0	T6	980°F	12 hrs	310°F	3 - 5 hrs
356.0	T51	-	-	440°F	7 - 9 hrs
356.0	T6	1000°F	12 hrs	310°F	3 - 5 hrs
356.0	T7	1000°F	12 hrs	400°F	3 - 5 hrs
356.0	T71	1000°F	10 - 12 hrs	475°F	3 hrs
A356.0	T6	1000°F	12 hrs	310°F	3 - 5 hrs
535.0	T5	-	-	750°F	5 hrs
713.0	T5	-	-	315°F	6 - 8 hrs
			or	Room Temp.	21 days