

Innov-X Alloy Analyzers

Aluminum Alloy Sort-ability Guide



MODEL	Alpha or Omega 20 Grades	Omega Xpress 28 Grades	Omega Xpress Vac 45 Grades
7000 SERIES	7005	7005	7005
	7016	7016	7016
	7019	7019	7019
	7039	7039	7039
	7049+	7049+	7049
	7050	7050	7050
	7072	7072	7072
	7075	7075	7075
7104	7104	7104	
6000 SERIES			6061
			6063
		6070	6070
			6151
	6253	6253	6253
6262	6262	6262	
5000 SERIES			5005
			5052
			5056-5082
			5083-5086
			5154
	5454	5454	5454
		5657	
4000 SERIES	4032	4032	4032
3000 SERIES			3002
			3003
			3004
			3005
			3105
2000 SERIES	2007	2007	2007
	2011	2011	2011
			2014-2017
	2018	2018	2018
			2024
	2098-2195	2098-2195	2098-2195
	2117	2117	2117
	2219-2519	2219-2519	2219-2519
2618	2618	2618	
1000 SERIES			1100
CAST ALUMI- NUM		319	319
		333-380	333-380
		355	355
		356-357	356-357
		383-384	383-384
		383	383
		384	384
DETECTOR TYPE	Si PiN	SDD Air	SDD Vac

Incremental Detector Technology Expands Aluminum Sorting Capabilities

This table illustrates Al alloy grade separations possible with current Innov-X Alpha and Omega Series Alloy Analyzer models and their respective detector technologies. As detector technology is stepped up, light element precision and sensitivity improves, increasing the number and range of Al grades that can be sorted.

Detector Type & Capability Chart	
Si PiN (Alpha & Omega)	Mg, Al & Si as treated as single component (LE) within the grade; heavier alloying materials (Cr, Mn, Cu, Zn, etc.) are measured directly. LE is measured by its X-ray scatter (density).
SDD Air (Omega Xpress)	Measures Mg, Al, & Si directly. Si gains improve 6000 & 300 series sorting; limited Mg precision.
SDD Vac (Omega Xpress Vac)	SDD + Vac = improved Mg precision allowing superior Al alloy analysis.

The Al grades shown here are the grades included in the new Innov-X Alloy grade library. As always, additional Al grades can be added to the analyzer library as needed.

Understanding Innov-X Alloy Analyzer Sorting Capabilities

To choose the best analyzer for your Al sorting needs, it is important to know the full range of Al alloys you will encounter. The analyzer sorts by comparing highly specific material chemistry against grade specifications in the analyzer's extensive library. As analyzer performance incrementally increases, so does the ability to sort additional grades and more grade differences.

Example: If you work with a limited range of the more popular wrought Al alloys, such as 3003, 2024, 7050, 7075, 6061, 6063, then you will be able to sort 3003 reliably from the other grades you encounter with an Alpha or Omega Si PiN analyzer. However, if your operation works with ALL of the Al alloys shown at left, in order to separate 3003 from other 3000 series grades, you will need the upgraded detector and performance of the Omega Xpress Vac analyzer.

NOTE: This chart is to be used as a guide only. Please contact your local Innov-X representative to assist you in making a final decision regarding the correct Innov-X handheld analyzer for your aluminum alloy sorting needs.

Bolded Grades = Use of an SDD Vac system provides the most confident identifications

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APPLICATION GUIDE