



Ordering Mass Standards and Test Weights

The following pages of this catalog contain all the information you'll need to place your mass standard or test weight order. If you're new to the specialized field of metrological weights, the ordering process can be broken into FIVE (5) simple steps:

- 1) Determine the regulatory standard that applies to your application. The international standard (OIML), the U.S. standard (ASTM E 617), or the U.S. commercial standard for Legal-for-Trade applications (NIST Handbook 105-1)
- 2) Determine the accuracy class appropriate for your application the accuracy and tolerance using information below and, as well as your internal ISO documentation and any applicable manufacturer's instructions.
- 3) Determine the type of laboratory documentation you require.
- 4) Using the information from the below steps 1-3 to select the weight or weight set and appropriate laboratory documentation for your application.
- 5) If your weights will require Legal-for-Trade certification prior to placing them in service, decide if you would like the certification to be handled by our metrology lab, accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), or sent to your state lab.

Accuracy Classes for Mass Standards and Test Weights

CURRENT STANDARD AND TEST WEIGHT ACCURACY CLASSES				OBSOLETE STANDARD
Typical Use	OIML*	ASTM E617*	NIST 105-1*	NBS CIR. 547*
Weight Calibration Certificate Essential				
Primary Laboratory Reference Standard High precision standards for calibration of weights and special precision analytical balances accuracy Classes I and II (class number depending on precision).	E1			
	E2			
		0,1		M,S
Weight Calibration Certificate Recommended				
High Accuracy Balances Working standard for precision analytical work, built-in weights and external weights used to calibrate moderate precision balances	F1	2		
		3		S1
	F2			
Traceable Certificate Acceptable				
Industrial Scales and Balance Accuracy Class III industrial scales, dial scales, trip balances, platform scales. Also used for accuracy Class IIIIL and IIII, and weights used to calibrate scales in Legal-for-Trade applications. ⁵		4		P
	M1	5		Q
	M2	6	F	T
	M3	7		



Ordering Weights and Weight Sets

1. Please describe your application and tell us what you need to accomplish with these weight(s) or weight set.
2. What is the maximum amount of weight you will need at any one time?
3. What is the minimum amount of weight you will need at any one time?
4. What tolerance are you looking for?
5. Is your tolerance driven by the equipment under test; the application; an internal specification document; or another source?
6. What "style" (ASTM, OIML, NIST) is required or preferred?
7. What configuration do you need (5-3-2-1 or 5-2-2-1)?
8. Do you need something that is custom manufactured?
9. What is your budget for this project?
10. Tell us about the environment. Is it
 - a. Indoor/outdoor?
 - b. Wet/dry?
 - c. Windy/still?
 - d. Corrosive, hazardous, or explosive?
 - e. A clean room?
 - f. Are there biohazard, electrostatic, or magnetic conditions to consider?
 - g. What else is noteworthy?
11. Are you replacing an existing weight or weight set?
12. If the answer to question number 11 is yes, then:
 - a. What do you like/dislike about the existing devices?
 - b. What configuration is the existing set?
 - c. What style is the existing set?
 - d. What laboratory documentation is needed for the existing set?
13. Does this weight set need to be legal-for-trade?
14. Do you need ISO/IEC 17025 & ISO 9000 laboratory documentation?
15. If you do not need ISO/IEC 17025 and ISO 9000 laboratory documentation, do you need traceability to NIST?
16. Do you need true mass value?
17. Do you need a book version of the Calibration Report?
18. Do you know how we send out laboratory documentation? Please refer to page 229. Is this acceptable?
19. Do you need a different option?
20. If you are getting any of the laboratory documentation above, do you need a recall date?
21. Would you like a complimentary precision measurement poster with your order?
22. What other precision services/equipment (recalibration, balances, accessories, liquid handling, static electricity, containment) do you use?

