

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 simple steps:

1. Determine the regulatory standard that applies to your application. The international standard (OIML) is summarized on pages 280-881; the U.S. standard (ASTM E 617) is summarized on pages 283; the U.S. commercial standard for Legal-for-Trade applications (NIST Handbook 105-1) is summarized on page 285.
2. Determine the accuracy class appropriate for your application by reviewing the accuracy and tolerance information below and on pages 284-289, as well as your internal ISO documentation and any applicable manufacturer's instructions.
3. Determine the type of laboratory documentation you require using the information on pages 294.
4. Using the information from steps 1-3 to select the weight or weight set and appropriate laboratory documentation for your application as listed on pages 159-257.
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 Rice Lake Weighing Systems' metrology lab, accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), or sent to your state lab. For information on the certification process of NVLAP-accredited labs, see page 293.

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 IIII 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		

¹ See pages 280-281 for more information on OIML weight classifications

² See pages 283 for more information on ASTM E617 weight classifications

³ See page 285 for more information on NIST 105-1 Class F weight classification

⁴ Listed for reference only. NBS Cir. 547 has been superseded by ASTM E 617 classifications

⁵ Please refer to page 279 for accuracy class definitions