Jewelry Scales and Carat Balances

A jewelry scale is a high-resolution balance reading in carats (1 ct = 0.2 g exactly), grams, pennyweight and troy ounces, typically 100–600 g capacity at 0.001–0.01 g readability. Buying or selling precious metals or gemstones by weight requires an NTEP Class II legal-for-trade instrument.

Jewelry and carat scale selection

Application	Typical capacity	Typical readability	Notes
Gold buying, scrap, pawn	100–600 g	0.01 g / dwt	NTEP Class II required
Gemstone and diamond weighing	100–200 ct	0.001 ct	Carat mode, draft shield
Bench jeweler, casting	200–600 g	0.01 g	Grams and troy ounces
Bullion verification	1–6 kg	0.1 g	Troy ounce mode

Certification and compliance

- Authorized A&D Weighing dealer. Sold as an authorized dealer since 1998, so every unit carries the full manufacturer warranty and factory firmware — not grey-market stock.
- NIST-traceable calibration certificate. Any instrument can ship with a calibration certificate produced in our Cypress, Texas lab using mass standards traceable to NIST, with as-found and as-left values recorded.
- Class I / II accuracy models. Analytical, precision and jewelry instruments here are built to NTEP Class I and Class II accuracy classes — the classes required when weight is read to 0.1 mg–0.01 g.
- ASTM E617 / OIML R111 test weights. Verification weights are supplied in ASTM Class 1–6 or OIML E2–M3 tolerances, sized so the standard's tolerance stays inside one third of the scale's smallest division.
- In-house repair & on-site service. Factory-trained technicians repair, adjust and re-certify weighing equipment in our own Texas workshop and on-site across the Houston metro.

Specification checklist

- Legal for trade Class II. Required for buying or selling by weight — Class III will fail inspection.
- Unit set. ct, g, dwt and ozt with internal conversion.
- Draft protection. Essential at 0.001 g; small samples move with any airflow.
- Calibration weight. Keep an ASTM Class 1 or 2 weight on hand and verify each session.
- Capacity headroom. Include trays, tongs and packaging in the load you plan for.

Frequently asked questions

What scale do I need to buy gold?

An NTEP Class II legal-for-trade scale, sealed by your state, reading in grams and pennyweight. Class III scales are not permitted for precious-metal transactions.

How much is a carat in grams?

One metric carat is exactly 0.2 grams, so a 5 ct stone weighs 1.000 g. Carat (gem weight) is unrelated to karat (gold purity).

How accurate does a jewelry scale need to be?

0.01 g is adequate for scrap gold by pennyweight; gemstone work generally needs 0.001 ct. Accuracy in use depends on draft protection and session-start verification with a certified weight.

Do jewelry scales need calibration?

Yes — verify at the start of each buying session with a certified ASTM Class 1 or 2 weight and have a NIST-traceable calibration performed annually.

Terminology

Accuracy	How close a displayed weight is to the sample's true mass. Accuracy is limited by readability, repeatability and linearity together, so a scale can never be more accurate than its specification sheet's worst of those three figures.
Calibration	Adjusting a scale's span so it reads a certified test weight correctly, documented with as-found and as-left values. Distinct from verification, which records a reading without changing anything.
Carat (ct)	A unit of gemstone mass equal to exactly 0.2 grams. A balance reading 0.001 g therefore resolves 0.005 ct.
Force restoration	A weighing mechanism that balances the load with an electromagnetic coil and measures the current needed to do so. It gives faster settling, better linearity and lower drift than a strain gauge, and is what A&D's SHS sensor uses.
Grain (gr)	A mass unit equal to 0.06479891 grams, used almost exclusively for propellant and bullet weights. One 0.001 g division equals about 0.0154 grain.
Pennyweight (dwt)	A precious-metal mass unit equal to 1.55517 grams, or one twentieth of a troy ounce.
Precision balance	A balance reading to between 0.1 g and 0.001 g, usually with an open pan. Coarser than an analytical balance and far finer than a bench or platform scale.
Troy ounce (ozt)	A precious-metal mass unit equal to 31.1035 grams, distinct from the avoirdupois ounce of 28.3495 grams.

EK1200i.com — authorized A&D Weighing dealer since 1998. Calibration, repair and application support from Cypress, Texas.
Call 832-290-3120 · info@mnmscales.com · https://ek1200i.com/jewelry-scales