

Tap and Die Sets

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Drilling & Cutting Tools



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(Conway_Electric_Street_Railway_spur_track_to_tap_and_die_factory,_circa_1911.jpg)

A tap and die set cuts internal and external screw threads. Taps cut threads inside drilled holes for bolts, while dies cut threads on rods for studs and bolts. Sets include the common metric and imperial sizes with the correct taps, dies and wrenches.

Key Features

- Metric sizes M3 to M12 typical
- Imperial UNC and UNF sections on some sets
- Tap and die handles included
- Drill size charts for each thread
- Storage cases with labelled positions

Typical Uses in the Workshop

- Tap threads for screws in project parts
- Cut bolts and studs from rod stock
- Repair damaged threads in machines
- Make custom threaded fasteners

Safe Operation

1. Drill the correct tapping hole size from the chart
2. Fit the tap in the wrench and start it square
3. Turn with even pressure and back off half a turn to break chips
4. Use cutting fluid generously
5. Cut external threads on rod with the die held square

SAFETY NOTES

- Taps snap easily - use the right size hole and pressure
- Wear eye protection for flying chips
- Clamp work firmly; never hold the work in hand
- Use cutting fluid to keep taps cool
- Clean chips from flutes with a brush, not fingers

Maintenance & Consumables

- Clean taps and dies after each use
- Wipe with an oily cloth to prevent rust
- Store each size in its labelled slot
- Replace broken taps promptly
- Keep cutting fluid topped up at benches

Specification & Buying Notes

A quality carbon or HSS metric set M3-M12 with a tap wrench and die stock is the classroom standard. Check the case holds the sizes and the drill chart is included. Add a tap extractor for the inevitable breakages.