

EMT vs IMC vs Rigid Metal Conduit

A specification and selection reference for electrical contractors, engineers, and procurement teams.

Quick comparison

	EMT	IMC	RMC
Full name	Electrical Metallic Tubing	Intermediate Metal Conduit	Rigid Metal Conduit
NEC article	Article 358	Article 342	Article 344
Product standard	ANSI C80.3	ANSI C80.6	ANSI C80.1
UL listing	UL 797	UL 1242	UL 6
Nominal wall	0.042 in (1/2 in) to 0.083 in (4 in)	approx. 0.080 in (10-gauge steel)	0.116 in to 0.148 in
Threaded	No - set-screw or compression fittings	Yes	Yes
Relative weight	Lightest	approx. 40% heavier than EMT	approx. 60% heavier than EMT
Field bending	Easiest - hand bender	Possible, more force	Hydraulic bender usually required
Physical protection	Lowest	High	Highest

Wall thickness and weight figures are nominal industry values from the ANSI C80 series. Confirm exact dimensions against the manufacturer submittal for the trade size you are specifying.

Choosing between them

Use EMT when

The run is indoors, dry, and not exposed to physical damage. Common in commercial interiors, exposed ceiling runs, and branch circuits. Fastest to install and lowest material cost.

Use IMC when

You need threaded conduit with better protection than EMT, but want to save weight and cost against RMC. IMC is permitted anywhere RMC is permitted.

Use RMC when

The run is subject to severe physical damage, direct burial, hazardous locations, or corrosive exposure. Also common on service risers and where the specification calls it out explicitly.

Fittings and compatibility

EMT fittings and RMC fittings are not interchangeable. EMT is unthreaded and uses set-screw or compression connectors and couplings. IMC and RMC are threaded and use threaded couplings, or approved transition fittings where a run changes between raceway types.

Where a run transitions from EMT to threaded conduit, use a listed combination coupling rated for both. Do not thread EMT - its wall is not designed for it, and the raceway loses its listing.

Common specification mistakes

- Specifying EMT for a run that will be exposed to physical damage or direct burial.
- Assuming EMT and RMC fittings interchange because the trade size matches.
- Ordering IMC on the assumption it is a drop-in cost saving without confirming the specification permits it.
- Overlooking corrosion protection requirements where conduit contacts concrete or soil.
- Not confirming that the trade size accommodates the conductor fill for the circuit.

What to send when requesting a quote

Providing these six items lets a distributor quote accurately the first time, without a round of clarification:

1	Raceway type	EMT, IMC, or RMC
2	Trade size and total footage	Include elbows and nipples separately
3	Fitting types and counts	Set-screw, compression, or threaded
4	Finish or coating	Standard galvanized, or PVC-coated
5	Application	Indoor, outdoor, buried, or classified location
6	Required on-site date	Drives whether stock or sourced product applies

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