Cable Gland Size Chart — M12 to M63: Cable OD Ranges, Threads and Selection

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Metric cable-gland sizes M12–M63 with standard clamping ranges and spanner sizes, how to pick a gland from the cable outside diameter, NPT equivalents, IP sealing, and Ex e/Ex d selection notes for hazardous areas.

Metric gland table

Gland size | Thread | Typical cable OD range (mm) | Spanner (mm) | NPT neighbour |

M12 | M12 × 1.5 | 3 – 6.5 | 15 | 1/4" NPT |

M16 | M16 × 1.5 | 4 – 10 | 19 | 3/8" NPT |

M20 | M20 × 1.5 | 6 – 13 | 24 | 1/2" NPT |

M25 | M25 × 1.5 | 11 – 17 | 29/30 | 3/4" NPT |

M32 | M32 × 1.5 | 15 – 21 | 36 | 1" NPT |

M40 | M40 × 1.5 | 19 – 28 | 46 | 1 1/4" NPT |

M50 | M50 × 1.5 | 26 – 35 | 55 | 1 1/2" NPT |

M63 | M63 × 1.5 | 34 – 44 | 68 | 2" NPT |

Clamping ranges are the common industry pattern for polyamide and brass compression glands; each manufacturer's datasheet narrows or widens them slightly, and reduced/enlarged seal inserts shift a size's range. Spanner sizes refer to the gland body hexagon of typical metric patterns.

Selecting in four steps

Measure the cable OD with calipers — not the nominal from the cable datasheet alone; sheath tolerances matter at range edges. Aim for the middle of a gland's range.

Pick the material: polyamide for general interior/exterior, nickel-plated brass for mechanical abuse, EMC and marine decks (brass Ex d/e example), stainless where washdown chemistry demands it.

Armour or not: SWA cable needs a two-part armour-clamping gland (CW/E1W pattern outdoors); unarmoured cable takes a simple compression gland.

Entry thread: European enclosures are metric-threaded or knock-out drilled to the same series; see the thread chart when mating to NPT or PG legacy entries.

IP rating and hazardous areas

A gland seals to its rating (IP66/68) only with the locknut tight, the entry face flat or gasketed, and the cable within the insert's range — an undersized cable in an oversized gland is the classic field leak. In Ex installations the gland is certified apparatus: Ex e (increased safety) compression glands such as the Peppers B4W M20 suit Ex e enclosures, while Ex d (flameproof) enclosures need barrier or Ex d-certified glands matched to cable type and the enclosure's certificate — and the gland's certification scheme (ATEX/IECEx) must match the site's. Unused entries take certified stopping plugs of the same protection concept. Hazardous-area luminaires and accessories are listed under Hazardous Area Equipment.

Frequently asked questions
What cable diameter fits an M20 gland?A standard M20 compression gland clamps cables of roughly 6–13 mm outside diameter; check the specific insert range on the gland's datasheet.What gland size for a 15 mm cable?15 mm OD sits in the M25 range ("H11–17 mm). M32 only becomes right above about 15–16 mm, depending on the maker's insert.Are metric gland threads interchangeable with NPT?No — metric gland threads are parallel M×1.5 and NPT is tapered 60°; use an adapter or a gland supplied with the matching entry thread.What is the difference between Ex e and Ex d glands?Ex e (increased safety) glands seal unarmoured or armoured cable into Ex e enclosures; Ex d (flameproof) enclosures require Ex d or barrier glands that maintain the flameproof path, selected per the enclosure certificate and cable construction.Why does my IP68 gland leak?Usually the cable OD is below the insert's clamping range, the locknut is loose, or the entry face lacks its sealing washer — the rating applies only within the specified OD range on a proper face.

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