

MINIMUM BENDING RADII

According to a draft version of EIA-568, the minimum bend radius for UTP is 4 times outside cable diameter, or about one inch. For multi-pair cables the minimum bending radius is $10 \times$ outside diameter. The minimum bend radii for Type 1A Shielded Twisted Pair (100 Mb/s STP) is 7.5 cm (3-in) for non-plenum cable, 15 cm (6-in) for the stiffer plenum-rated kind.

For optical cables not under tension, the minimum bend radius is 10 times diameter; and for cables under tension, no less than 20 times cable diameter. The standard goes on to state that no optical cable will be bent on a radius less than 3.0 cm (1.18-in).

A different standard, ISO DIS 11801 (essentially a parallel standard to the one mentioned above), for 100 ohm and 120 ohm balanced cable lists three different minimum bend radii. Minimum for pulling during installation is 8 times cable diameter, minimum installed radius is 6 times for riser cable, and 4 times cable diameter for horizontal runs. For fiber optic cables, the requirements are the same as those stated above.

Some manufacturers recommendations differ from the above, so it is worth checking the spec sheet for the cable you plan to use.

