DEFLECTION

Deflection is always determined at midspan.

The empirical formula for deflection is:

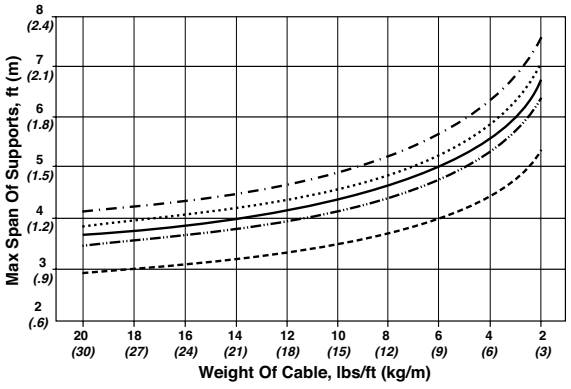
$$D = \frac{131 \cdot W \cdot L^4}{E(OD^4 - ID^4)}$$

Where:
- D = Midspan deflection (in.)
- OD = Outside diameter of conduit (in.)
- ID = Inside diameter of conduit (in.)
- E = Modulus of elasticity of conduit (psi), which is 1,400,000 for epoxy fiberglass conduit
- L = Distance between hangers (ft.)
- W = Total weight of cable and conduit (lbs/ft.)

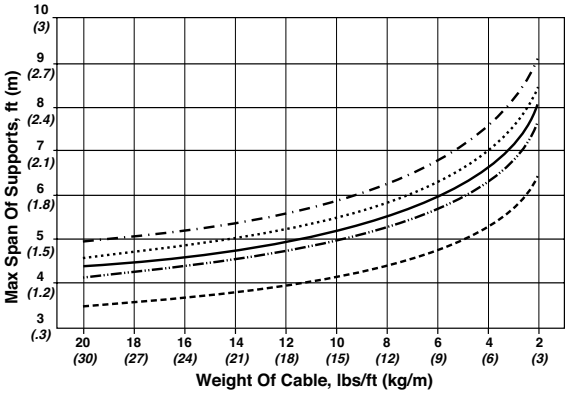
It is recommended that midspan deflection never exceeds ⅝ inches *(16 mm)*.

Below are easy graphs for determining support distance between hangers for various diameters and wall thicknesses of conduit.

¾" SW DIAMETER



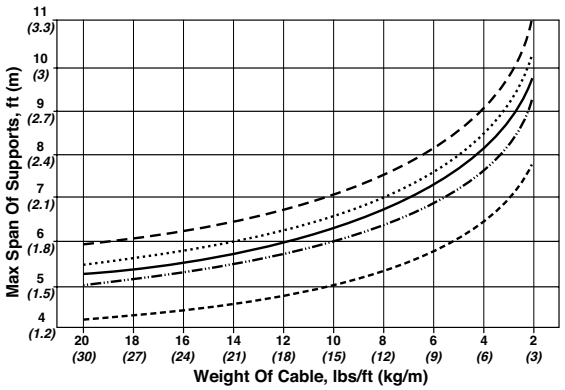
1" SW DIAMETER



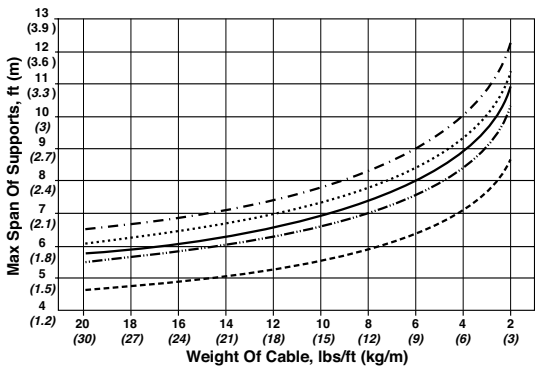
¼" ***(6)*** Deflection | ½" ***(13)*** Deflection | ⅝" ***(16)*** Deflection | ¾" ***(19)*** Deflection | 1" ***(25)*** Deflection

ENGINEERING/DEFLECTION GRAPHS

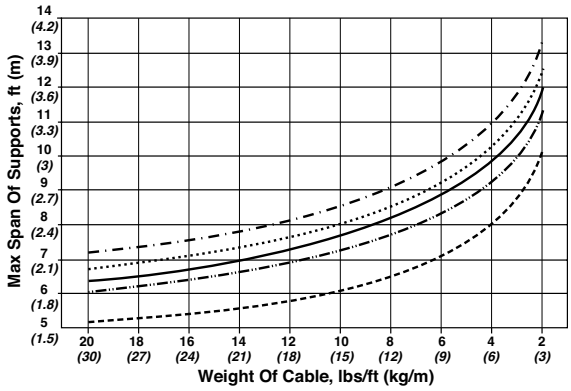
1¼" SW DIAMETER



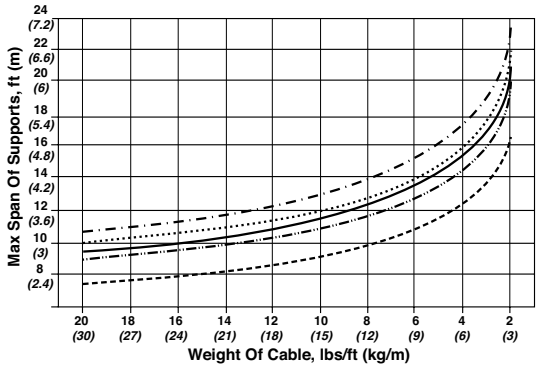
1½" SW DIAMETER



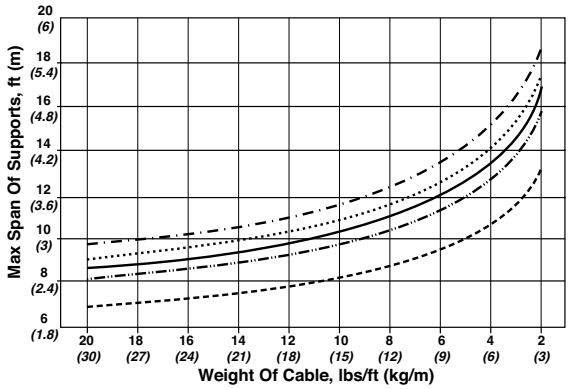
2" SW DIAMETER



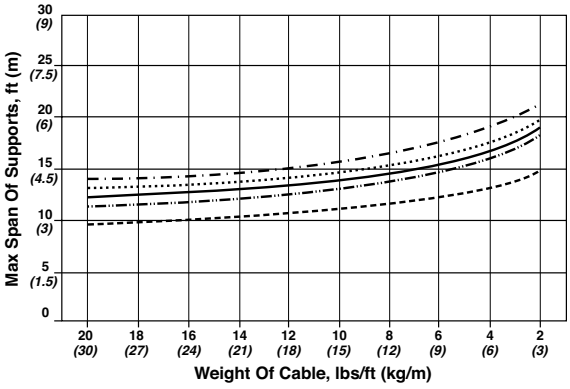
2" XW DIAMETER



3" SW DIAMETER



3" XW DIAMETER



¼" ***(6)*** Deflection ½" ***(13)*** Deflection ⅝" ***(16)*** Deflection ¾" ***(19)*** Deflection 1" ***(25)*** Deflection

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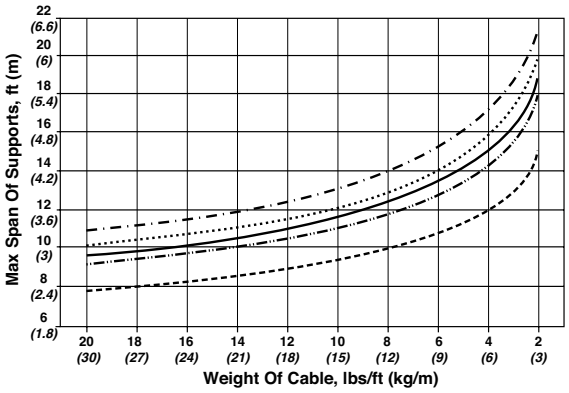
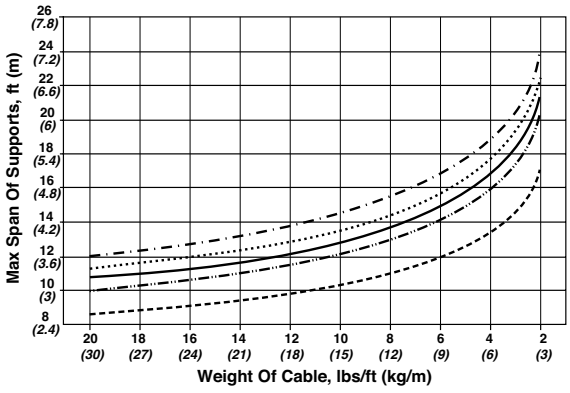
BH-1012

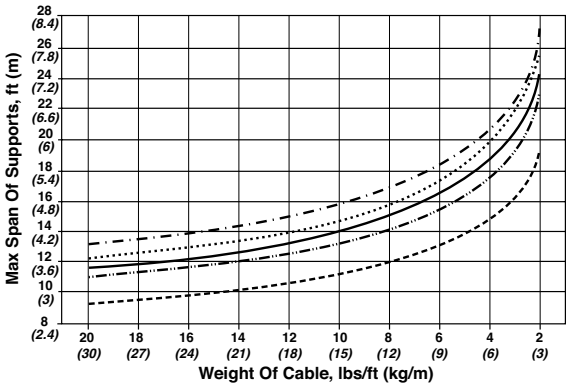
3½" SW DIAMETER



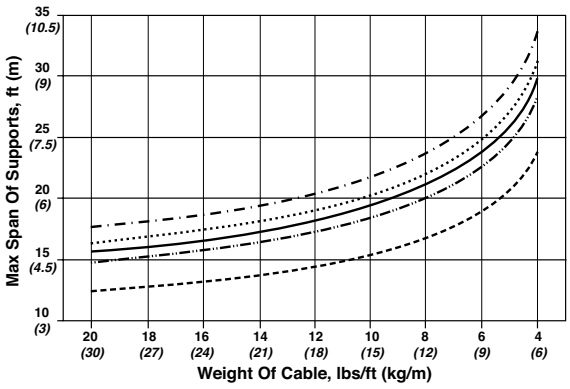
4" SW DIAMETER



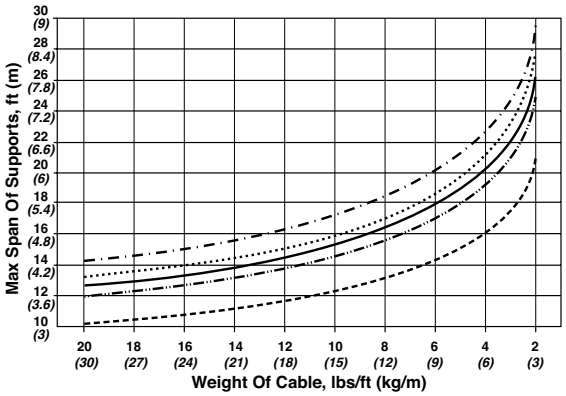
4" HW DIAMETER



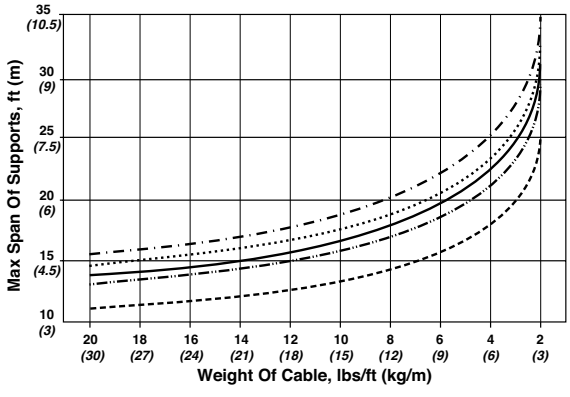
4" XW DIAMETER



5" SW DIAMETER



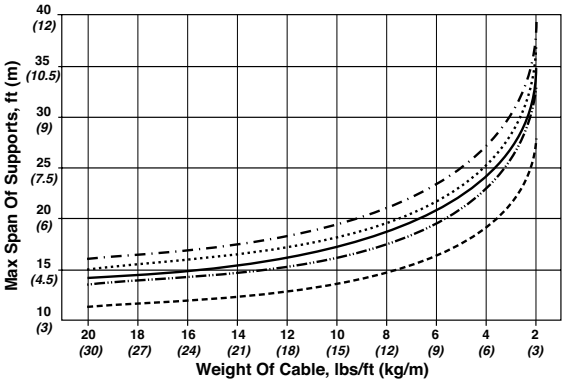
5" MW DIAMETER



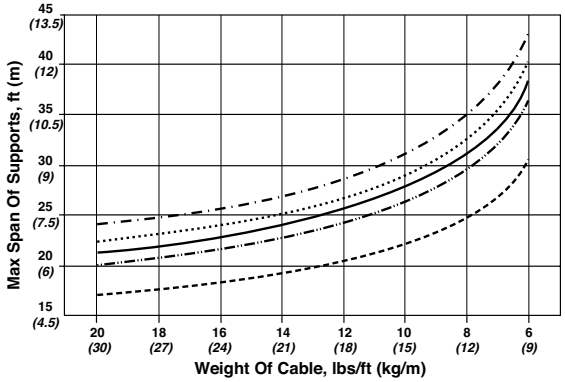
¼" ***(6)*** Deflection ½" ***(13)*** Deflection ⅝" ***(16)*** Deflection ¾" ***(19)*** Deflection 1" ***(25)*** Deflection

ENGINEERING/DEFLECTION GRAPHS

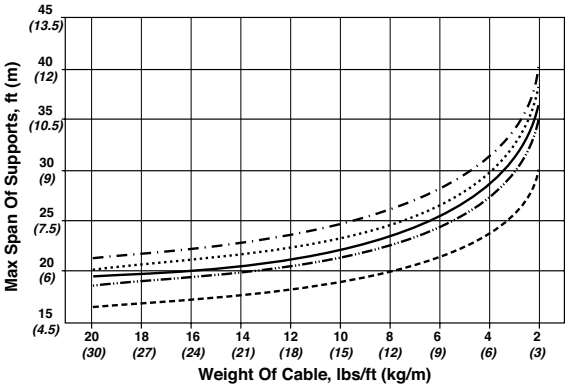
5" HW DIAMETER



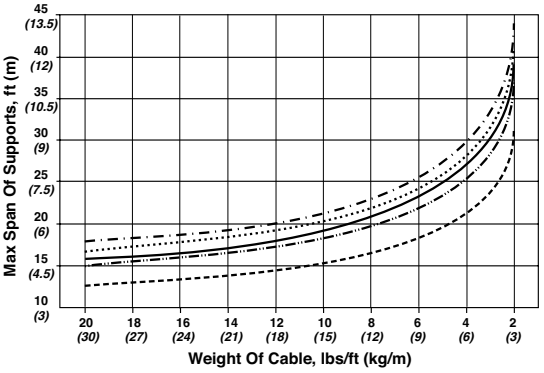
5" XW DIAMETER



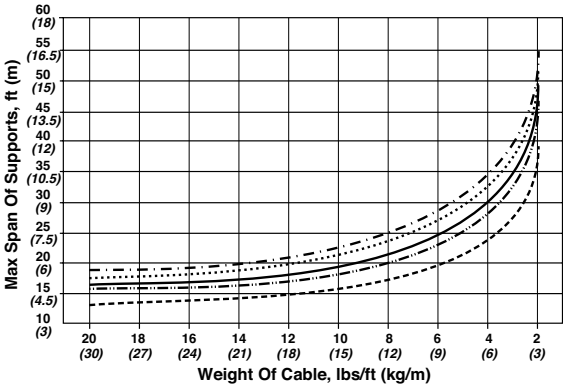
6" SW DIAMETER



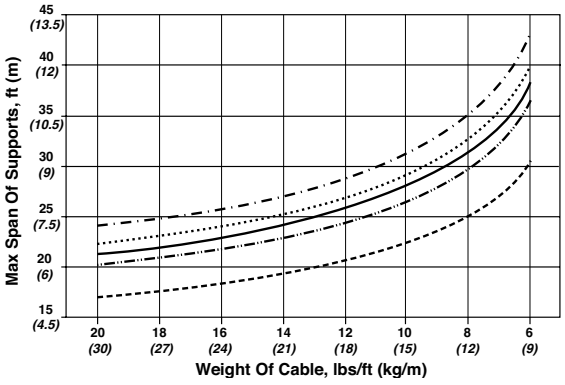
6" MW DIAMETER



6" HW DIAMETER



6" XW DIAMETER



¼" *(6)* Deflection ½" *(13)* Deflection ⅝" *(16)* Deflection ¾" *(19)* Deflection 1" *(25)* Deflection

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