

**WIRE SAFE™ WIREWAY TROUGH AND FITTINGS - PRODUCT  
SPECIFICATIONS**

**Installation Instructions**

**Description.** Carlton Wire Safe wireway and wiring troughs are manufactured from extruded PVC. The standard color is gray. The wireway consists of a base channel that is formed to receive a "clip-on" cover. Wiring troughs include a pair of ready-to-install end caps.

**Cover Installation and Removal.** The cover can be installed by exerting hand pressure along its front face in such a manner as to engage and clip projections on the side walls of the base channel. The cover can be removed by inserting a tool (i.e. a screwdriver shaft) into one end of the wireway enclosure and exerting pressure against the underside of the cover which is then "peeled off" from the base.

**Wireway Fittings.** Fittings enable the wireway to be positioned around corners and enable tees and crosses to be created without detracting from the protective characteristics. Interconnecting pieces can be assembled using couplings and rivets or cement as necessary.

Molded fittings do not require couplings since they fit on the exterior of the wireway. However, primer and solvent cement are needed. See cementing instructions.

Fabricated fittings do require internal or external couplings, and these must be ordered separately. To install fittings, a .982" diameter hole should be drilled in the wireway to match the external coupling hole. A push rivet should be used to



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connect the two pieces. To connect an internal coupling to the inside of a fitting, use Carlon Quick-Set Clear Cement.

**Applications.** These systems are designed for use in commercial and industrial areas. They may be used for the containment of electrical wiring/cables for power and lighting circuits and also communication and computer facilities. They are suitable for mounting on the surface of walls or ceilings or suspended across suitably positioned supports. Ambient temperatures should not exceed 122° F.

### **Installation.**

1. Mark the surface upon which the wireway is to be mounted.
2. Measure, run, and identify position of fittings.
3. Remove cover from wireway, starting at one end, with a peeling action (use of a screwdriver or similar lever is recommended).
4. Drill mounting holes through base at 60" centers maximum. Two rows of mounting holes should be drilled, adjacent to each wall of the wireway in order to evenly distribute the load.
5. The holes in the wireway should be drilled oversize to allow for expansion. Washers should be mounted under the head of the mounting device, which should not be tightened to its full extent.
6. Mount the wireway using screws or bolts.
7. Affix the wireway cover by aligning it to the wireway base and then pressing it into its engaged position, starting at one end.
8. The cover should be made to overlap the base joint in order to improve rigidity of the joint.



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### **Engineering Specifications**

**Code Approvals.** Carlton's Wire Safe Wireway and Wiring Trough is recognized by the current National Electrical Code, Article 362-B, for nonmetallic wireways. It is UL Listed for electrical wiring up to 600 volts. UL File Numbers: UL EI 51021.

### **Specification for Carlton Wire Safe Wireway and Wiring Trough.**

- The wireway and wiring troughs shall be Carlton Wire Safe Wireway and Wiring Trough.
- The Carlton Wire Safe Wireway and Wiring Trough shall provide protection for electrical, low voltage, data and communication wiring or cables.
- The Carlton Wire Safe Wireway and Wiring Trough shall be listed and installed per the NEC Article 362-B for nonmetallic wireways.
- The Carlton Wire Safe Wireway and Wiring Trough shall be manufactured from gray precision extruded Polyvinyl Chloride (PVC) meeting UL 94 V-0 requirements and shall be suitable for field painting.
- The Carlton Wire Safe Wireway and Wiring Trough shall include base, cover, fittings, etc.
- The Carlton Wire Safe Wireway and Wiring Trough shall provide all fittings required to form a complete, integrated surface raceway system. End caps shall be gasketed and shall have a NEMA Type 12 rating.

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- The Carlton Wire Safe Wireway and Wiring Trough shall provide raceway with the following cross sectional areas:
  1. 2 x 2 - 3.165 in.<sup>2</sup> (20.4 cm<sup>2</sup>)
  2. 3 x 3 - 7.378 in.<sup>2</sup> (47 cm<sup>2</sup>)
  3. 4 x 4 - 13.694 in.<sup>2</sup> (88 cm<sup>2</sup>)
  4. 6 x 6 - 31.871 in.<sup>2</sup> (205 cm<sup>2</sup>)

**Fittings.** Internal and external elbow shall be a fitting cover that snaps onto the main base. Flat elbows and flat tees shall be a fitting cover that snaps on to the main base. End caps shall be gasketed and NEMA Type 12 rated.

**Installation.** Install in accordance with the manufacturer's instructions, NFPA 70 and NECA standard. Install base, cover, fittings, accessories, etc., as necessary for a complete system.

**Materials**

PVC Homopolymer (ASTM F1784)	Minimum cell class 12354B
Specific Gravity (ASTM D792)	1.46
Thermal Conductivity (ASTM C177)	1.3 Btu/hr./ft. <sup>2</sup> /°F/in.
Heat Deflection Temperature @264 psi (ASTM D648)	700C
Tensile Strength (ASTM D638)	600 psi

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Flammability (UL 94)	V-0
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**Physical Properties**

Size	Crush Strength <sup>1</sup> (lbs.)	Impact Strength <sup>2</sup> (ft.-lbs.)
2 x 2	650	40
3 x 3	500	30
4 x 4	500	40
6 x 6	600	50

**Dimensions**

Outside Nominal Size (in.)	Outside Actual Size (in.)	Inside Height (in.)	Inside Width (in.)	Inside Area (in.2)	Wireway Thickness (in.)	Cover Thickness (in.)	Wt./Ft. (lb./ft.)
2 x 2	1.97 x 1.97	1.8	1.79	3.31	0.09	.08	0.6
3 x 3	2.96 x 2.96	2.8	2.76	7.94	0.10	.08	0.85
4 x 4	3.94 x 3.94	3.75	3.72	14.39	0.11	.08	1.48
6 x 6	5.91 x 5.91	5.67	5.67	13.48	0.12	.12	2.29