Amiantit Oman

Leaders in pipes, infrastructure & Molded products

Reliable
Cable Management System

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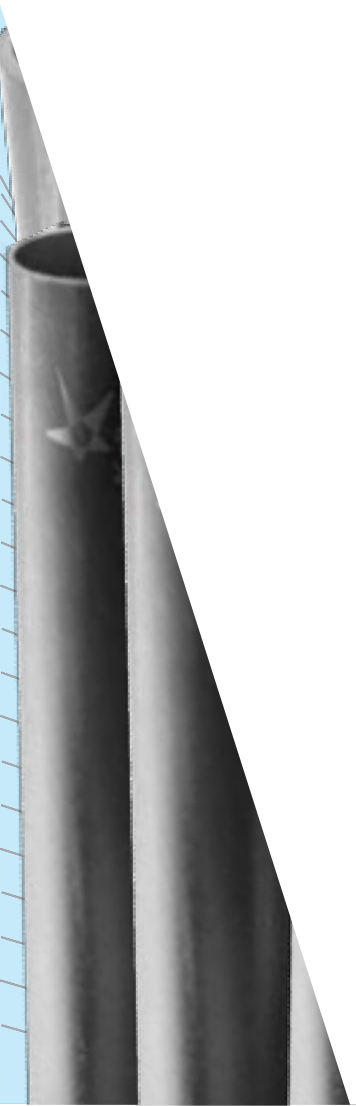
Conduits

The need for improved quality and reduced cost of wiring installations puts demands on all concerned in the project from consultants to contractors

Amiantit conduit systems offer the expertise and facilities to handle these demands effectively and economically. We designed our conduits, slab boxes and accessories to create an integrated raceway system tough enough to meet the rugged day to day challenges of the construction Industry.

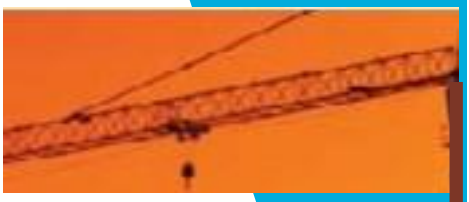
Amiantit PVC Nonmetallic Tubes (Electrical rigid Conduits) are designed to use as Electrical cable/ wire raceways. Protection is provided from dust, oil, dirt, water as well as a wide range of corrosive atmosphere.

Amiantit Conduits and fittings set new standards in performance and aesthetic appeal. They are the natural choice for fast moving environments with versatility built in. Amiantit offers Adapters, couplings, elbows, access fittings, boxes, cover plates, expansion fittings and spacers- Virtually any fitting required to complete the PVC Conduit system



Features

- Self extinguishing PVC
- Standard Electrical Black
- Impact Resistant PVC
- Non Corroding
- Fire Resistant
- Non Combustible 2 Hours
- Flexible enough to be bent by hand, yet tough enough to withstand crushing and breaking
- Interior surface significantly reduces the amount of friction when pulling cables through long runs, even in runs with 90° bends.



Strength

Amiantit PVC Fittings offer both high impact and high tensile strength

Corrosion Resistant

PVC is resistant to external corrosion and pitting and will not rust. This ensures a lower maintenance cost and longer performance life.

Non Conductive

PVC eliminates the most dangerous second point to contact in phase to ground faults. The use of separate ground conductor gives a complete and positive ground for the entire system

Chemical Resistant

Amiantit conduit and fittings are resistant to a wide range of chemicals such as acids, alkalies, or salt solutions.

Fire Resistance

As a building material PVC offers outstanding performance characteristics. PVC will not burn unless an external flame source is applied, and will not sustain ignition once the flame source is removed. Amiantit PVC Conduits and fittings has a flash ignition temperature of 850° F

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Specification

Electrical Round Rigid Conduit & Fittings

• Product Name	UPVC Conduits
• Application	Conduit for LV Systems, Electrical Power & Light, Data, Telecommunication, used in Building wiring
• Length	3 m, Plain Ends
• Colour	Black/ White
• Manufactured according to	BS 6099, BS EN 50086-1:1994, OS109, GS 33
• Chemical Name	Base Resin: Co Polymer Resin

Applicable Standard

Comply with the requirements of BS 6099, BS 4607 Part 2, BS EN 50086, OS 109

Mechanical Properties

Tensile strength, Yield	ASTM D 638	7,800 PSI
Flexural Modulus	ASTM D 790	9,200 PSI
Thermal Properties		
Melting Point	ASTM D 789	420 F

Heavy Guage (HG)

Size	Std Packing
20 mm	100 Lengths
25 mm	100 Lengths
32 mm	100 Lengths
38 mm	100 Lengths
50 mm	100 Lengths

Medium Gauge (MG)

Size	Std Packing
20 mm	100 Lengths
25 mm	100 Lengths
32 mm	100 Lengths
38 mm	100 Lengths
50 mm	100 Lengths

Commercial Gauge (AO)

Size	Std Packing
20 mm	100 Lengths
25 mm	100 Lengths
32 mm	100 Lengths
38 mm	100 Lengths
50 mm	100 Lengths

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UPVC Conduit Accessories

Comply with the requirements of BS 4607 parts 1

PVC ELECTRICAL CONDUIT FITTINGS

S.No	Image	Product Description	Size
1		COUPLER	19mm
2			20mm
3			25mm
4			32mm
5			38mm
6			50mm
7		FEMALE ADAPTOR	19mm
8			20mm
9			25mm
10			32mm
11			38mm
12			50mm
13		One Way JUNCTION BOX	19mm
14			20mm
15			25mm
16		TWO WAY JUNCTION BOX	19mm
17			20mm
18			25mm
19		THREE WAY JUNCTION BOX	19mm
20			20mm
21			25mm
22		FOUR WAY JUNCTION BOX	19mm
23			20mm
24			25mm
25		U WAY JUNCTION BOX	19mm
26			20mm
27			25mm

S.No	Image	Product Description	Size
28		Y WAY JUNCTION BOX	19mm
29			20mm
30			25mm
31		H WAY JUNCTION BOX	19mm
32			20mm
33			25mm
34		LOOP IN BOX	19mm
35			20mm
36			25mm
37		SADDLE	19mm
38			20mm
39			25mm
40			32mm
41			38mm
42			50mm
43		ANGLE WAY JUNCTION BOX	19mm
44			20 mm
45			25 mm
46		PVC BEND	19mm
47			20mm
48			25mm

Circular Junction Boxes available in sizes of 20 and 25 mm.

Loop –in

Angle

U-way

Terminal

Tee

Y-way

Through

Intersection

H-way

Installation

Installation

Amiantit fittings, boxes, and accessories shall be installed in accordance with Article 362 of the 2002 National Electrical Code. Where conduit penetrates a fire rated wall, floor or ceiling assembly, an approved fire stop system as listed in nationally recognized testing laboratory shall be used.

Assembly

Join PVC fittings with PVC Conduits by Solvent cement. After cutting PVC Conduit, sharp edges or burrs from inside the conduit should be removed with a knife. Thoroughly clean the end of the pipe and inside the fitting with a pipe cleaner. Apply a generous amount of solvent cement to both surfaces, side together and give a quarter turn to ensure solvent is spread evenly on the material. Hold together for a few seconds until the joint is made.

Expansion and Contraction

All conduit pipe and fittings expand and contract with changes in temperature. All materials expansion and contraction rates are represented by coefficients of thermal expansion.

A general rule of thumb is that for every 100˚F temperature change in a 100 ft. run of PVC conduit; the conduit will undergo 3.6” of expansion or contraction.

Use of Expansion Joints

In installations where the expected temperature variation exceeds 25˚F expansion joints must be used. An expansion joint consists of two tubes, one telescoping inside another. When installing expansion joints alignment of the piston and barrel is important. Straps should be placed approximately one foot on either side of the joint to ensure that any movement is directed squarely into the joint.

When expansion joints are required the following steps should be followed:

1. DETERMINE NUMBER OF JOINTS REQUIRED:

Use the following formula to calculate the total expected expansion in the run.

$$\text{Total Expansion} = \frac{\text{Total Temp. Change } ^\circ F}{10} \times \frac{\text{Length of run ft.}}{100} \times 0.36$$

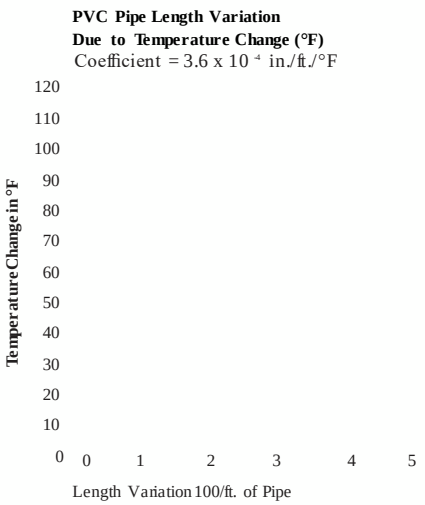
The expansion joints should then be installed at even intervals throughout the run.

$$\text{Number of Joints} = \frac{\text{Total expansion}}{4}$$

2. DETERMINE PISTON OPENING

The expansion joint must be installed to allow both expansion and contraction of the conduit run. Because installation temperatures may vary, the piston setting must be determined. The correct piston opening is determined using the following formula:

$$\text{Piston (in)} = \frac{\text{max temperature } (^\circ F) - \text{installing temperature } (^\circ F)}{\text{Temperature change } (^\circ F)} \times 4$$



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Practice

Amiantit non-metallic conduits are so constructed that it will be possible to bend the conduit easily with the aid of bending spring and all conduits and conduit fittings are of unthreaded type. The number of single core, PVC insulated non-sheathed cables run in one conduit shall be such that it permits easy drawing of the cables. The actual number of cables drawn into any conduit shall not be greater than the number given in the appropriate table. Where different sizes of cables are drawn into a conduit, the number and sizes of cables installed shall be selected in accordance with the method detailed in tables. A separate insulated earth wire shall be drawn into all rigid non-metallic conduits.

Capacity of Conduits

Table 1

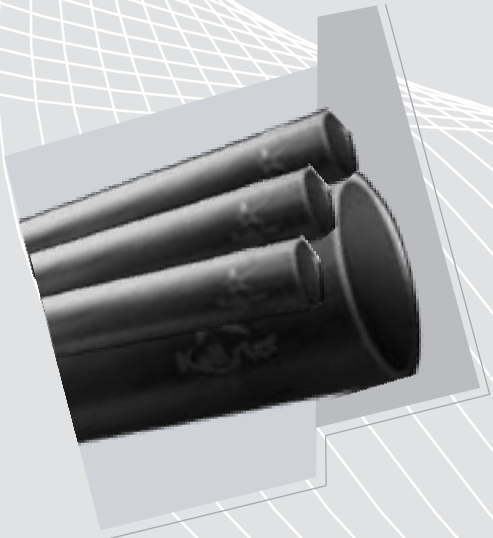
Capacity of conduits for simultaneous drawing of single core PVC insulated cable for a straight run upto 10m without bends.

Nominal cross sectional area of conductor	Size of Conduit (mm)				
	20	25	32	38	50
1.5	11	-	-	-	-
2.5	8	-	-	-	
4.0	5	10	-	-	-
6.0	4	7	13	-	-
10.0	2	4	7	10	-
16.0	2	3	6	9	
25.0	-	2	4	5	10
35.0	-	-	3	4	7
50.0	-	-	2	3	5
70.0	-	-	-	2	4

Table 2

Capacity of conduits for simultaneous drawing of single core PVC insulated cables for a run upto 10m with one bend.

Nominal cross sectional area of conductor	Size of Conduit (mm)				
	20	25	32	38	50
1.5	8	-	-	-	-
2.5	6	-	-	-	-
4.0	4	8	-	-	-
6.0	3	6	11	-	-
10.0	-	3	6	8	-
16.0	-	2	5	7	12
25.0	-	-	3	4	8
35.0	-	-	2	3	6
50.0	-	-	-	2	4
70.0	-	-	-	-	3



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