



ABOUT US

From a modest beginning with Conductors, Compounds and Wires & Cables, almost three decades ago, the Polycab Group Set up a State of Art manufacturing facilities at Daman in 1997, to address key market determinants. Starting the project from scratch Polycab was able to design a manufacturing facility around State of Art disciplines of Computer integrated manufacture .The Quality & Manufacturing setup is sourced out from the World renowned Machinery and Technology Suppliers with constant upgradations and expansions.

At POLYCAB, We study the requirements of the penultimate users with our commitment for Quality and Value. These are converted into process specifications based on Indian & International Standards.

In India with economic reforms and gradual opening of economy to the global system, the Power sector has become one of the key areas of attention of everybody concerned.

Efficient and dependable power system being the requisite, **Aerial Bunched Cable** is the item which is receiving attention of all public sector as well as private sector power distributors. It is expected that in the coming years, use of aerial bunched cables will rise phenomenally all over India.

EXPERIENCE:

After extensive research Polycab has successfully developed and introduced Aerial Bunched Conductor Cables, and have already achieved technical competence, manufacturing ability, and marketing experience by supplying ABC cables to the following Customers: -

- 1. BSES LTD (for Gridco – Orissa)**
- 2. North Delhi Power Ltd - Delhi**

TAILOR MADE DESIGN

POLYCAB have recognized the need for H.T & L.T ABC cables in the emerging market due to thrust in the Transmission & Distribution network revamping programme by Govt. of India. **We can interact with you to design for you H.T. & L.T. Aerial Bunched Cables to meet your specific requirements.**

AERIAL BUNCHED CABLES

INTRODUCTION

Aerial Bunched Cable (ABC) is a very novel concept for Over Head power distribution. When compared to the conventional bare conductor over head distribution system, ABC provides higher safety and reliability, lower power losses and ultimate system economy by reducing installation, maintenance and operative cost. This system is ideal for rural distribution and specially attractive for installation in difficult terrains such as hilly areas, forest areas, coastal areas etc.

ABC is also considered to be the best choice for power distribution congested urban areas with narrow lanes and by-lanes. In developing urban complex, ABC is the better choice because of flexibility for rerouting as demanded by changes in urban development plan. Aerial bunched cable system is specially suited in limited space conditions like densely populated areas where laying of underground cables is impossible or extremely expensive

Most of the faults in overhead power supply systems occur due to failure in transmission lines, whether these are HT or LT, resulting in immense loss and inconvenience to consumers. The main weakness of overhead lines are that its power carrying conductors are bare.

To overcome the above deficiency, Aerial Bunched Cable systems have been introduced at many places across the world for both HT and LT systems. Principally, the system is a compromise between insulated power cable systems and bare overhead conductor systems. As far as basic construction goes, there are three or four power carrying conductors suitably insulated and laid around a bare or insulated weight-carrying conductor, which also serves as earth/neutral conductor. The cable is then hanged on transmission poles/towers suitably. Since the cores are insulated the chances of faults reduces to a great extent. While it lacks the mechanical strength and safety of underground cables, the very fact that it is hanged overhead enables it to avoid mechanical abuses that an underground cable is normally subjected to.

In comparison to bare overhead lines, aerial bunched cable has very high degree of safety and reliability due to the conductors being insulated with the best dielectric medium. This ensures good protection against ground and line faults leading to considerable increase in system efficiency as against bare overhead lines. The problem of free-clearance is also minimized.

Tampering with power-line like hooking also gets eliminated, resulting in much more efficient utilization of power.



HT AERIAL BUNCHED CABLES

While specifically talking about HT Aerial Bunched Cables, these are basically three single cored unarmored cables laid around a weight carrying conductor which also serves as an earth or neutral conductor.

TYPICAL CONSTRUCTIONAL DETAILS (H.T. ABC):**POWER CORES**

Conductor: Composed of H2/H4 grade Aluminium to class 2 grade of IS 8130 or IEC 60228 or other equivalent standards. It can be from 35 mm² to 300 mm².

Conductor Screen: (applicable for cables above 3.3 kV grade)

Extruded semiconducting layer as per IS 7098 (Part 2) or IEC 60502 or any other equivalent international standard.

Insulation: Typically this may be XLPE insulation as per IS 7098 (Part 2) or IEC 60502 which gives both material property as well as thickness level required.

Insulation screen: Wherever applicable (mostly 6.6 kV onwards) it comprises of an extruded layer of semiconducting material followed by a metallic tape (mostly copper).

Jacket: ST2 grade PVC to IS 5831.

MESSENGER WIRE

This typically consists of either strands of Aluminium alloy wire to IS 398 (Part) or galvanized steel wire to BS 183 as chosen by the customer. It may have a jacket similar to Power cores.

Core identification: By printing numbers 1,2,3 on the jackets of Power cores and 0 on the jacket of messenger core.

We can supply the cable to other international standards like IEC, BS, etc or to customers own specifications and needs.

**POLYCAB WIRES PVT. LTD.**

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