



WINDING WIRES FLAT

Manufacturers of large electric machines rely on insulated round and flat wires made of copper and aluminium. These wires are used in the production of windings for motors, generators and transformers.

MICAPLY offer a wide range of different insulation build-up and thus support the specific requirements of our customers.

ADVANTAGES OF RECTANGULAR COPPER WIRES:

- Flat wires offer a better fill factor due to their stack-ability. They make a highly compact motors when followed a hairpin or wave winding.
- Flat wires support automated winding, making coil insertion easy.
- Flat winding wires offer less electrical resistance due to higher cross-sectional area. This means that copper loss is significantly lower in comparison to round wires.
- Flat wires covers more surface area in the slot, they can provide better power density. This also enables them to generate the peak power needed for a traction motor. As the surface area of Flat wires is more than round wires, they offer better heat dissipation.
- Flat wires offer superior ability to withstand cyclic TEAM (thermal, electrical, ambient and mechanical) stresses.
- It offers operational reliability under harsh environmental conditions of vibration, shock, humidity, ambient temperature etc.
- Suitable for winding methods for high space factor.





WINDING WIRES FLAT

TYPES OF FLAT WINDING WIRES WE OFFER:

1) CORONA RESISTANT KAPTON® POLYIMIDE COPPER WIRE :

Polyimide film with corona/partial discharge resistant property for AC traction motors. Additionally the film has better thermal conducting properties compared to standard polyimide film. Enhanced thermal transfer properties makes it ideally suited for variable frequency drives.

2) KAPTON® POLYIMIDE WIRE :

Kapton® polyimide film with FEP adhesive wrapped on flat copper wire to achieve required insulation thickness. The film is bonded to copper which is cleaned for better adhesion, by high frequency induction heating combined by radiant heating to obtain a void free and uniform insulation that can withstand high operating temperature for continuous duty application. The film covered wire meets all requirements of a traction duty motor, harsh environment conditions and mechanical stresses like vibrations.

3) FIBRE GLASS COVERED COPPER/ALUMINIUM WINDING WIRES :

For F-Class and H-Class Motors / Transformers Coils

4) FIBRE GLASS COVERED COPPER/ALUMINIUM WINDING WIRES :

Traction Motors / Switch Gears / Transformers (Dry Tye or Oil filled).

