

PRISMATIC COMPASS

It is the most commonly used compass to find the magnetic bearing of a line. It consists a circular box with a glass cover, in the center of which a magnetic needle is balanced on a sharp pointed steel pivot with the help of a glass cap. The needle carries on aluminum prisms with graduations in degrees and half degrees, which are inverted style. The object value and the focusing steel for the prism are filled at diametrically opposite points. The former consists of a tringed metal frame in the centre of a nurse hair is stretched when it is folded on the lid it presses the lifting pin separating it from the pin. The perpendicular of the needle can be quickly checked by the inward pointing of the break pin fitted at the base of the vane. A reflecting prism which a sighting slit at the top of the perpendicular side is fixed to the focusing stud. On the base a prism cap is fitted with a turnable screw and dash are sometimes provided to reduced the luminosity of the object. The object value is sometimes provided with an adjustable mirror to sight the object more accurately. The prismatic compass is normally mounted on a light, wooden tripod which a ball socket joint.

RANGING ROD : There are rods of circulation are octagonal cross-sections made of well seasoned wood or light steel. Normally the length of the rod is 2m with 10 equal divisions which are alternately coloured in black and white. These are used in station marking and setting out lines.

PLUMB BOB : These are top shaped rods made of brass or steel which a device to at each string or trend. Plumb bob is used for accurate centring and testing the verticality of a ranging rod or staff.

PIN : These are made of good quality hardened and tempered steel wire which are black enamelled. The arrow are 400mm in length. These are used in chaining and marking the station with a tag or it.

TAPE : A tape is the most common and widely used equipment for measuring short length. Normally tapes are 10m, 20m, 30m, 50m dimensions are supplied in a leather or metal case with a corrosion resistant metal flange with a winding device. The width of a tape varies from 6mm to 16mm. Tapes of cloth, linen, metal, steel alloy and fiber are commonly used.

DATUM : It refers to any arbitrarily assumed level surface or line from which vertical distance as elevation are measured.

HORIZONTAL PLANE : It refers to the plane tangential to the level surface at a specific point. A horizontal line is a any line contained in the horizontal plane.

LINE OF COLLIMATION : It is the Line passing through the intersection the cross hair to the optical centre of the object glass of the telescope. When the Line of collimation revolves around the vertical axis in the horizontal plane called the plane of collimation.

STATION : There are around point defined by the nodes of triangles of junction of a travers.

FORE AND BACK BEARING : There fore bearing of a Line refers to that which measures in the direction of progress of the opposite direction is called back bearing.