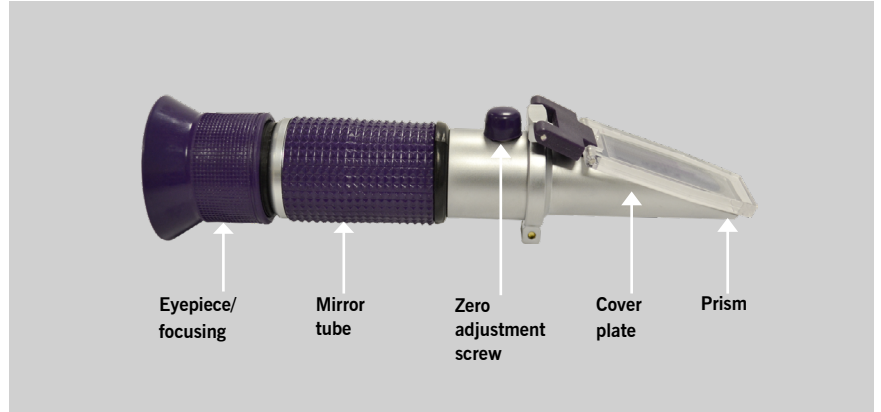


Refractometer for rapid determination of anti-freeze concentration and degree of protection



An easy to use instrument for testing the strength and degree of protection of anti-freeze solutions such as Kamco Freezbreaker non-toxic anti-freeze, and solar thermal mixtures.

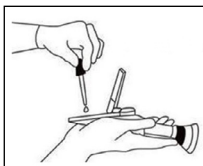
The Kamco refractometer has been designed to give a rapid indication of the level of concentration of Freezbreaker and other glycol based antifreeze compounds. Both the concentration, and the likely degree of protection are indicated.

Freezbreaker is a propylene glycol based antifreeze compound, and therefore readings should be taken using the propylene glycol scale on the right hand side of the three reference scales.

Antifreeze based on ethylene glycol (such as for automotive applications), should be read on the left hand scale.

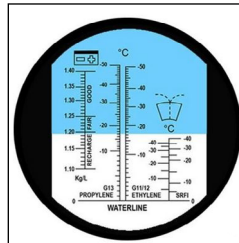
Adjustment of zero:

Open the cover plate (2) and using the supplied plastic dropper put one or two drops of distilled water on the prism. Close the cover plate and press it lightly. Adjust the zero adjustment screw (3) until the light/dark border line coincides with the zero line.



the surface of the prism with a soft cloth (supplied). Place one to two drops of the solution to be measured onto the prism, using the supplied plastic dropper. Close the prism plate and press the plate down lightly.

Point refractometer in the direction of a light source, look into the eyepiece, and take the reading. You will see a circular field with graduations down the center (you may have to focus the eyepiece to clearly see the graduations). Take the reading where the boundary line of blue and white cross the scale. The scale will provide a direct reading of the sample concentration.



2. After taking a measurement, clean away the tested sample which will be on both the prism and the cover plate, using a moist soft cloth. After drying, the refractometer should be stored in a clean, dry environment.

should be carried out at the same temperature – if this varies considerably, then the zero point should be checked and adjusted at least every 30 minutes.

2. Do not immerse the refractometer in water to clean it.
3. As the unit is a precision optical instrument, it should be handled with care. Do not scratch or touch the optical surfaces. Store the refractometer in a dry non-corrosive atmosphere.
4. If the instrument is used in accordance with instructions, the optical performance should not change.

Specification:

Range

Ethylene glycol: -50°C to 0°C.
 Propylene glycol: -50°C to 0°C.
 Battery acid: 1.15 to 1.30 S.G.

Resolution

Ethylene glycol: 1°C.
 Propylene glycol: 1°C.
 Battery acid: 0.01 S.G.
 Weight (g) 176.
 Length (mm) 160.

Method of operation:

1. Open the cover plate (2), clean and dry

Care and maintenance:

1. Zero adjustment and sample measurements

Kamco Support
 technical expertise; help-line and
 spares service.



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