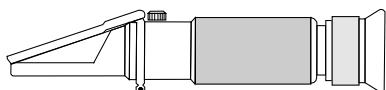


EXTECH USER MANUAL

Battery/Coolant Brix Refractometer with ATC

Model RF41



Introduction

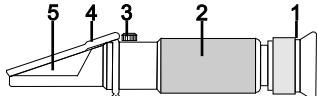
Congratulations on your purchase of the RF41 Refractometer. Handle this precision optical instrument gently and avoid touching the optical surface. Careful use will provide years of reliable service.

Specifications

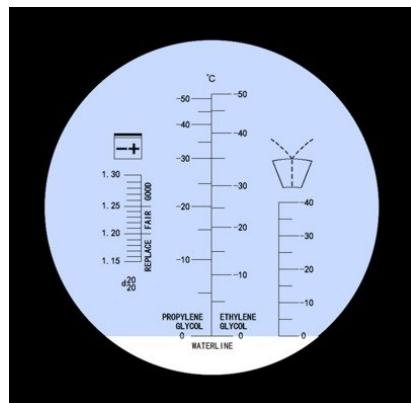
| | |
|------------|--|
| Range | 0 to -50°C propylene glycol freeze point |
| | 0 to -50°C ethylene glycol freeze point |
| | 1.15 to 1.30 specific gravity battery acid |
| | 0 to -40°C cleaning fluid freeze point |
| Resolution | 1°C |
| Dimensions | 6.3 x 1.6 x 1.2 in. (160 x 40 x 30 mm) |
| Weight | 6.4 oz. (180 g) |

Description

1. Eyepiece
2. Mirror Tube
3. Adjustment screw
4. Cover Plate
5. Prism



Field of View



Operation

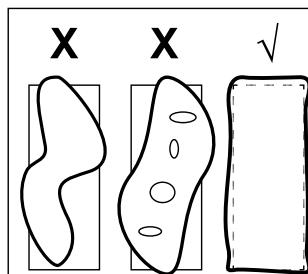
This instrument measures the refractive index of a sample and displays the results in °C or specific gravity.

1. Zero Adjustment

Cover the prism with several drops of distilled water. Close the cover plate and view the light/dark boundary (shadowline). If necessary, turn the zero adjustment until the shadowline aligns with the scale's zero line. The zero calibration should be performed at ambient temperature and should be repeated if the temperature changes. After adjustment, clean the prism with a soft cloth.

2. Sample Preparation and Reading

Cover the prism with several drops of distilled water from the included vial. Close the cover plate so that the liquid spreads across the entire surface of the prism without air bubbles or dry spots (as shown). Allow the sample to remain on the prism for approximately 30 seconds.



Three examples of a sample on the prism. The image at right shows the correct method.

While holding the instrument under a light source, look through the eyepiece. The brix concentration is determined by the intersection of the light and dark boundary (shadowline) on the scale. If the scale appears out of focus, adjust by rotating the eyepiece. The instrument also features an eye-guard to prevent stray light from entering the eyepiece and causing reflections.

It may be necessary to adjust the position of the light source to maximize the contrast of the shadowline. Under normal conditions, optimal contrast is obtained by holding the instrument underneath and perpendicular to a light source.

Once a reading has been taken, wash prism with mild soap and water using a clean cloth. Then rinse with distilled water and place the instrument in the supplied case. Store the instrument in a secure, dry environment.

3. Automatic Temperature Compensation (ATC)

Temperature greatly affects accuracy, and for this reason ATC is employed in this instrument. When the ambient temperature is higher or lower than 20°C, the readings are automatically compensated. ATC is active in the range of 10 to 30°C.

Two-year Warranty

Teledyne FLIR warrants this Extech brand instrument to be free of defects in parts and workmanship for **two years** from date of shipment. To view the full warranty text please visit: <https://www.flir.com/support-center/warranty/instruments/extech-product-warranty/>

Customer Support

Local Telephone Support List: <https://support.flir.com/contact>

Return Material Authorization (RMA):

<https://customer.flir.com/Home>

Customer Service: <https://support.flir.com/ContactService>

Technical Support: <https://support.flir.com>

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