



# Handheld Refractometers



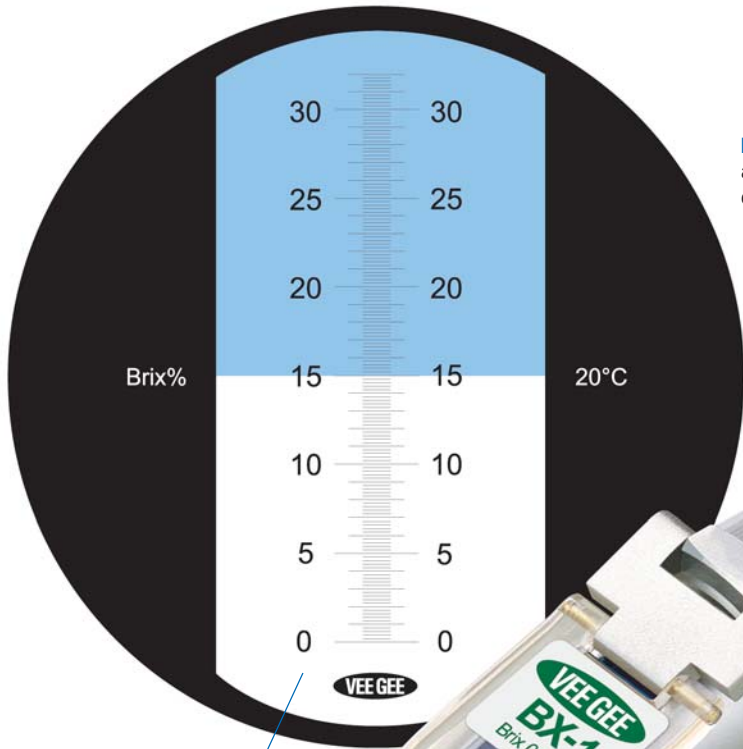
## X-Series Models

- Largest & Sharpest Display Scale Available
- Exclusive “Zero-Ring” Requires No Calibration Tools
- Durable, All-Metal Design

VEE GEE® X-Series Handheld Refractometers are exceptionally simple to operate and provide quick, accurate measurements for the concentration of nearly any aqueous solution.

**Easy to Use.** Operation consists of placing 1 or 2 drops of sample on the prism, closing the daylight plate over the sample, then looking through the focusable, cushioned-rubber eyepiece for the readings (see scale below left).

**Accurate.** Featuring the largest, easiest-to-read scale available with clear, sharp figures, screen shading, and incredible contrast. These features significantly enhance overall accuracy...even when several different operators use the instrument. All units feature rubber grips on the body, which block the transmission of hand heat to reduce temperature errors.



**Scale.** The largest and sharpest scale display available on a handheld refractometer.

**Daylight Plate.** Exceptionally durable with a double-hinge design allowing even thick samples to be easily measured.

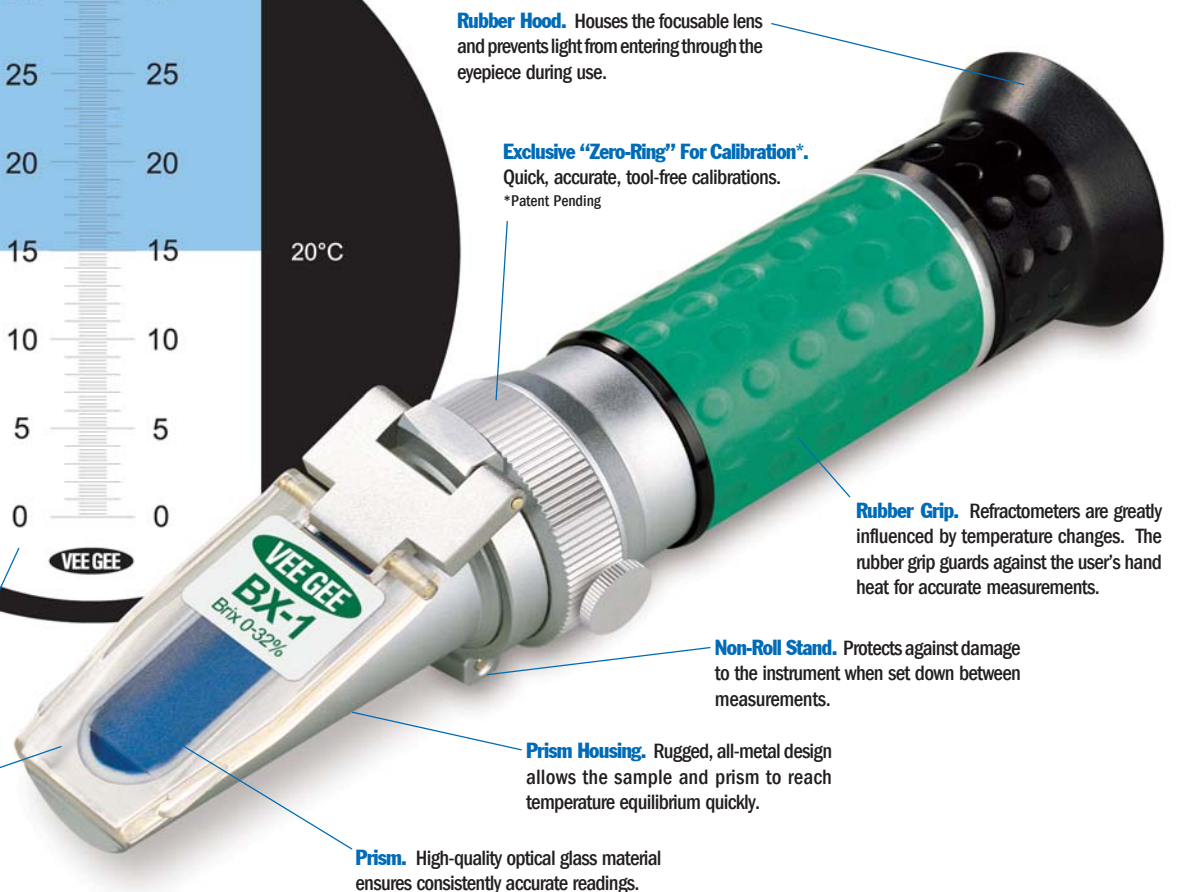
**Compact & Portable.** The small size of the X-Series models allows them to be used anywhere...the field, plant, or lab.

**Tool-Free Calibration.** The VEE GEE® exclusive “Zero-Ring” (patent pending) eliminates the hassle of using a separate tool for calibration. Simply place a few drops of distilled water or liquid standard (R.I. oil or prepared sucrose solution) on the prism, turn the built-in “Zero-Ring” until the shadowline is at the correct value of the liquid, and secure the setscrew...that’s it!

**Durable.** The X-Series models feature rugged construction to provide years of reliable use. The prism is mounted in an all-metal housing which allows the sample and prism to reach temperature equilibrium quickly. Also feature non-roll stands to ensure that once the units are placed on a table or bench top, they won’t be prone to roll off the surface.

**Wide Selection Of Scales & Ranges.** Choose from Brix, Salinity, Refractive Index (nD), and Coolant (freezing points of Ethylene & Propylene Glycol, Battery Charge Level).

**Automatic Temperature Compensation (ATC).** Models BTX-1, BTX-20, STX-3, CTX-1, & CTX-2 feature ATC, which frees the user from having to re-calibrate in work environments with large temperature swings. The effective compensation range is 10-30°C.



**Rubber Hood.** Houses the focusable lens and prevents light from entering through the eyepiece during use.

**Exclusive “Zero-Ring” For Calibration\*.** Quick, accurate, tool-free calibrations.  
\*Patent Pending

**Rubber Grip.** Refractometers are greatly influenced by temperature changes. The rubber grip guards against the user’s hand heat for accurate measurements.

**Non-Roll Stand.** Protects against damage to the instrument when set down between measurements.

**Prism Housing.** Rugged, all-metal design allows the sample and prism to reach temperature equilibrium quickly.

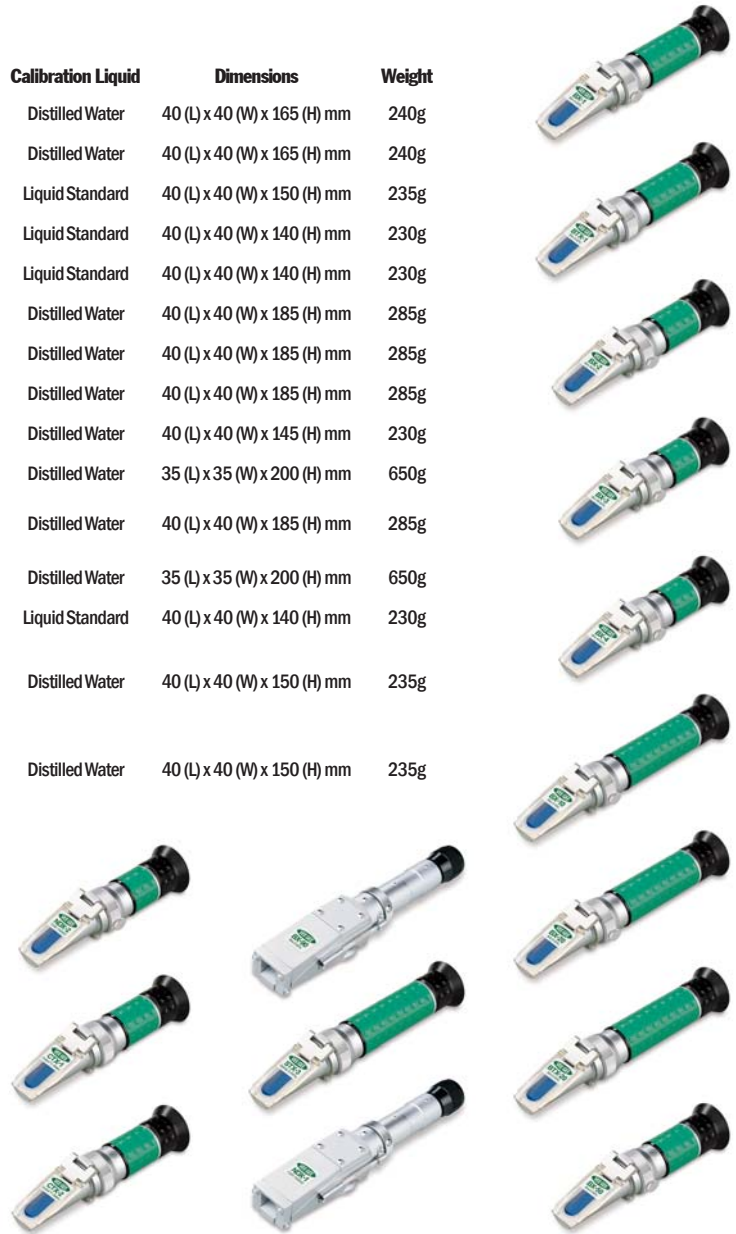
**Prism.** High-quality optical glass material ensures consistently accurate readings.

# VEE GEE X-Series Specifications

Model	Scale	Range	Resolution	Accuracy	ATC	Calibration Liquid	Dimensions	Weight
<b>BX-1</b>	Brix	0.0-32.0%	0.2%	±0.2%	--	Distilled Water	40 (L) x 40 (W) x 165 (H) mm	240g
<b>BTX-1</b>	Brix	0.0-32.0%	0.2%	±0.2%	10 to 30°C	Distilled Water	40 (L) x 40 (W) x 165 (H) mm	240g
<b>BX-2</b>	Brix	28.0-62.0%	0.2%	±0.2%	--	Liquid Standard	40 (L) x 40 (W) x 150 (H) mm	235g
<b>BX-3</b>	Brix	58.0-92.0%	0.2%	±0.2%	--	Liquid Standard	40 (L) x 40 (W) x 140 (H) mm	230g
<b>BX-4</b>	Brix	45.0-82.0%	0.2%	±0.2%	--	Liquid Standard	40 (L) x 40 (W) x 140 (H) mm	230g
<b>BX-10</b>	Brix	0.0-10.0%	0.1%	±0.1%	--	Distilled Water	40 (L) x 40 (W) x 185 (H) mm	285g
<b>BX-20</b>	Brix	0.0-20.0%	0.1%	±0.1%	--	Distilled Water	40 (L) x 40 (W) x 185 (H) mm	285g
<b>BTX-20</b>	Brix	0.0-20.0%	0.1%	±0.1%	10 to 30°C	Distilled Water	40 (L) x 40 (W) x 185 (H) mm	285g
<b>BX-50</b>	Brix	0.0-50.0%	0.5%	±0.5%	--	Distilled Water	40 (L) x 40 (W) x 145 (H) mm	230g
<b>BX-90</b>	Brix	0.0-90.0%	0.2%	±0.2%	--	Distilled Water	35 (L) x 35 (W) x 200 (H) mm	650g
<b>STX-3</b>	Salinity Specific Gravity of Seawater	0-100‰ 1.000-1.070	1.0‰ 0.001	±1.0‰ ±0.001	10 to 30°C	Distilled Water	40 (L) x 40 (W) x 185 (H) mm	285g
<b>NDX-1</b>	Refractive Index (nD)	1.333-1.520	0.001	±0.001	--	Distilled Water	35 (L) x 35 (W) x 200 (H) mm	650g
<b>NDX-2</b>	Refractive Index (nD)	1.425-1.520	0.001	±0.001	--	Liquid Standard	40 (L) x 40 (W) x 140 (H) mm	230g
<b>CTX-1</b>	Freezing Point of Propylene Glycol Freezing Point of Ethylene Glycol Specific Gravity of Battery Acid	-50.0 to 0.0°C -50.0 to 0.0°C 1.10-1.40	1.0°C 1.0°C 0.01	±1.0°C ±1.0°C ±0.01	10 to 30°C	Distilled Water	40 (L) x 40 (W) x 150 (H) mm	235g
<b>CTX-2</b>	Freezing Point of Propylene Glycol Freezing Point of Ethylene Glycol Specific Gravity of Battery Acid	-50.0 to 32.0°F -60.0 to 32.0°F 1.10-1.40	2.0°F 2.0°F 0.01	±2.0°F ±2.0°F ±0.01	10 to 30°C	Distilled Water	40 (L) x 40 (W) x 150 (H) mm	235g

### All Models

- Sample Type:** Transparent, Translucent, & Opaque
- Sample Quantity:** >0.1ml
- Prism:** Optical Glass
- Prism Housing:** Copper Alloy w/ Nickel-Chrome Coating
- Supplied With:** Carrying Case (1 ea.), Plastic Transfer Pipet (1 ea.), Instruction Manual (1 ea.)



# VEE GEE Ordering Information

Cat. No.	Model	Scale	Range	Resolution	Accuracy	ATC	Dimensions	Weight
43001	BX-1	Brix	0-32%	0.2%	±0.2%	No	40x40x165mm	240g
43002	BTX-1	Brix	0-32%	0.2%	±0.2%	Yes	40x40x165mm	240g
43003	BX-2	Brix	28-62%	0.2%	±0.2%	No	40x40x150mm	235g
43005	BX-3	Brix	58-92%	0.2%	±0.2%	No	40x40x140mm	230g
43007	BX-4	Brix	45-82%	0.2%	±0.2%	No	40x40x140mm	230g
43009	BX-10	Brix	0-10%	0.1%	±0.1%	No	40x40x185mm	285g
43011	BX-20	Brix	0-20%	0.1%	±0.1%	No	40x40x185mm	285g
43012	BTX-20	Brix	0-20%	0.1%	±0.1%	Yes	40x40x185mm	285g
43015	BX-50	Brix	0-50%	0.5%	±0.5%	No	40x40x145mm	230g
43017	BX-90	Brix	0-90%	0.2%	±0.2%	No	35x35x200mm	650g
43036	STX-3	Salinity	0-100‰	1.0‰	±1.0‰	Yes	40x40x185mm	285g
		Specific Gravity of Seawater	1.000-1.070	0.001	±0.001			
43053	NDX-1	Refractive Index (nD)	1.333-1.520	0.001	±0.001	No	35x35x200mm	650g
43055	NDX-2	Refractive Index (nD)	1.425-1.520	0.001	±0.001	No	40x40x140mm	230g
43062	CTX-1	Freezing Point of Propylene Glycol	-50 to 0°C	1°C	±1°C	Yes	40x40x150mm	235g
		Freezing Point of Ethylene Glycol	-50 to 0°C	1°C	±1°C			
		Specific Gravity of Battery Acid	1.10-1.40	0.01	0.01			
43064	CTX-2	Freezing Point of Propylene Glycol	-50 to 32°F	2°F	±2°F	Yes	40x40x150mm	235g
		Freezing Point of Ethylene Glycol	-60 to 32°F	2°F	±2°F			
		Specific Gravity of Battery Acid	1.10-1.40	0.01	0.01			



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