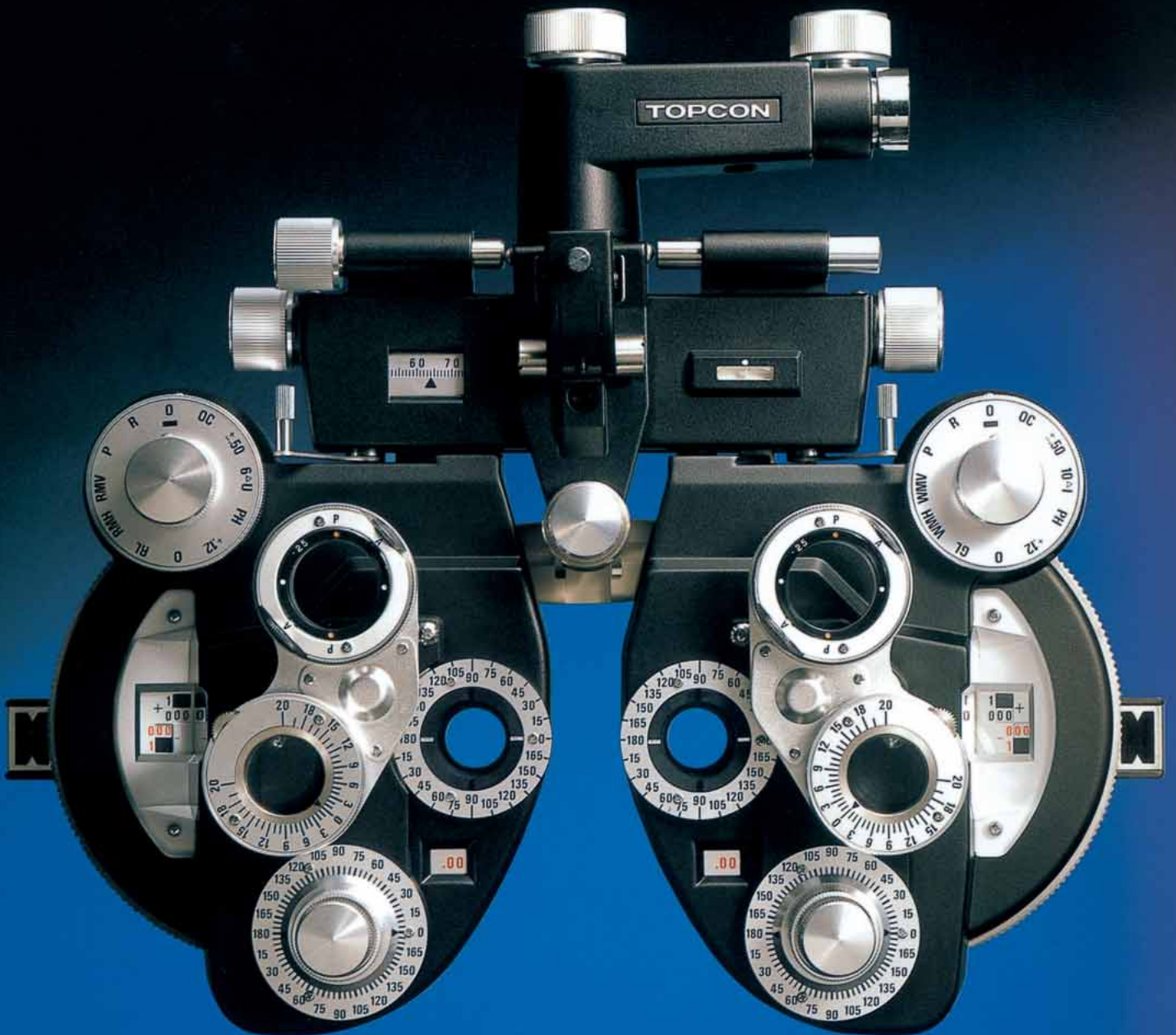


VISION TESTER

VT-10



Versatility & Convenience combined with Unparalleled Response & Precision

Precision and convenience are a tradition in high quality TOPCON optical instruments.

The new VT-10 vision tester advances this tradition still further, making refraction quicker and easier than ever before, providing unequaled performance and exceptional versatility.

Precision in design and workmanship guarantees accuracy in refraction measurements—accuracy that won't deteriorate even after long years of use.

Total quality from TOPCON means you can have total confidence in the performance you'll enjoy from the VT-10 vision tester.



A Half-Century of Dedication to Superior Optical Instrumentation

TOPCON has remained a leader and major innovator in optical instrumentation and technology for more than half a century. Intensive dedication to engineering research and manufacturing precision has made TOPCON the name to know for reliable performance.

Precision Engineering for Superior Performance;

Designed for total precision, the new VT-10 vision tester represents TOPCON optical engineering at its very best—extreme accuracy over the widest possible testing range. Internal mechanisms are precisely machined to the finest tolerances; parts and components are made from the finest materials, all corrosion-resistant and tested for performance and durability.

Multi-Coated Lenses for Superior Optical Performance

Every lens used in the VT-10 receives a special multi-coating that eliminates flare, ghost images and reflections. In addition, the multi-coating assures clearer, brighter images with improved contrast and excellent color fidelity.



The TOPCON VT-10 is available in either black or gray finishes.

Controls & Scales Make Refraction Comfortable; Functional

Wide Testing Range

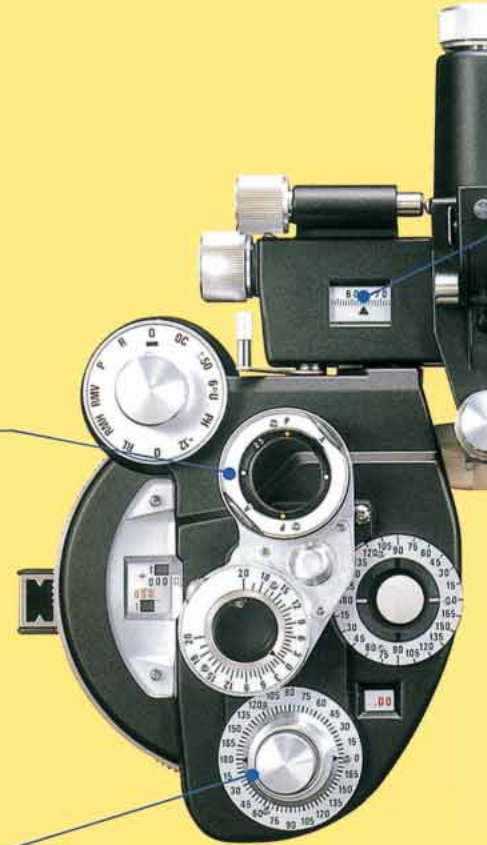
The testing range available with the VT-10 is extraordinary, the standard cylinder power range extends to 6,000 in 0.25D increments. In addition, auxiliary lens sets are incorporated to fine-tune cylinder power measurements to 0.12D increments or extend cylinder power range to 8.00D. Accurate prism reading even below 0.5 Δ are possible thanks to the 20 Δ range (1 Δ increments) of the precision-gear rotary prism loupes. The VT-10 is also available in plus or minus cylinder models.

Synchronized Cross-Cylinders

The most significant time-saving feature of the VT-10 is its synchronization of cross-cylinder loupe rotation to cylinder axis adjustment. Special gearing automatically synchronizes the rotation of the loupe each time you change cylinder axis correction. The result? You simply read a single scale, one time, after completing a full series of axis checks. The bi-loupe turret lets you index power or axis loupes with a single touch.

Easy Controls & Clear Scales

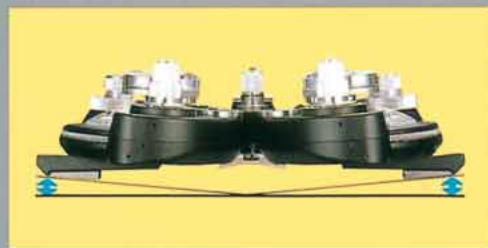
Control of cylinder axis and power testing is amazingly simple; concentric control knobs within a double-calibration axis scale make adjustment a quick, one hand action through the full 360 $^\circ$ range. The axis scale reads in 5 $^\circ$ increments, with 15 $^\circ$ markings. An additional axis scale is located at the main aperture, for convenient reference during retinoscopy. The low position of the control knobs keeps the operator's hands out of the line of vision.



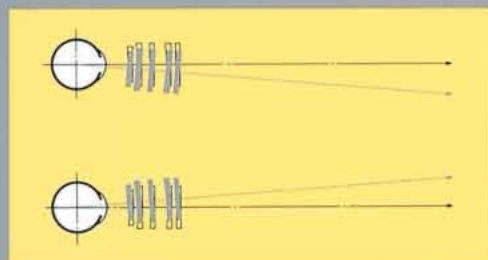
Simple Convergence System



Precise measurements at both near and distant testing for optimal results.



One quick adjustment of the dual convergence levers and the VT-10 provide total accuracy in near vision testing measurement.



Sealed Optics



The examination apertures feature cover lenses for convenience and protection. Dust, eyelashes, etc. can't get in, and the lenses are easily removed for simple cleaning. The patient always has a bright, clear image to view. (Standard accessories include face shields that can be sterilized for optimum comfort and hygiene.)

es Designed to ction Quick & Features for Versatility

Versatile Adjustments

Convenient dual controls make it easy for the operator to adjust interpupillary distance, in a range from 48mm to 75mm. The mechanism is sealed for protection and smooth functioning. An easy-to-read scale provides 1mm graduations, and a vergence adjustment controls reductions in P.D. during near testing.



A Wide Range of Versatile Auxiliary Lenses

The TOPCON VT-10 comes with a full complement of versatile auxiliary lenses—10 different lenses plus two open apertures, any of which can be indexed into position with one-touch speed and convenience. A red lens/green lens shift, for example, is immediately available for binocular vision testing. The auxiliary lens plate has a flat black finish to prevent stray reflections during use.



Fast, Precise Results

TOPCON VT-10 incorporates a single-dial power control that lets the operator quickly dial in any spherical power from +16.75D through 0 to -19.00D, in 0.25D increments. To make settings faster, a strong sphere control allows adjustment in 3.00D steps; the auxiliary lens knob provides for fine-tuning in 0.12D increments for absolute accuracy.



OPTIONAL ACCESSORIES



$\pm 0.37/\pm 0.50D$ cross cylinder,
 $+2.00D$ retinoscopic lens.

ACCESSORIES

The holder for rotary near point card mounts to a sturdy rod with a distance scale from 5 to 28 inches—centimeter and diopter scales are included. A hinged bracket moves it into position immediately, or raises it out of the way. Accessory lenses come in an accessory box, holding dual sets or $-0.12D$ and $-2.00D$ cylinder lenses.



SPECIFICATIONS

Type

Subjective refraction testing equipment

Item and range of measurement

The value in () is with accessory lens or auxiliary lens attached:

Myopia	0 to -19.00D in 0.25D step (0.12D step)
Hyperopia	0 to +16.75D in 0.25D step (0.12D step)
Astigmatism	0 to -6.00D (-8.00D) in 0.25D step (0.12D step)
Cross-Cylinder	$\pm 0.25D$ ($\pm 0.37D$ and $\pm 0.50D$ as option)
Phoria and vergency	20^Δ to 0 to 20^Δ by 1^Δ step Inner 40^Δ Outer 40^Δ (50^Δ) Upward and Downward 40^Δ (46^Δ)
Near vision test	Main optical axes of both lenses converges by means of a tilt mechanism at 40cm in front of the eyes at 64mm P.D. If P.D. for far vision is less than 54mm, converging operation stops.
Binocular balance test	Rotary prism and polarizing lens methods are available.
P.D.	48 to 75mm by 1mm step
Level adjustment	More than 4.5° for right and left banks
Dimensions	335 (at 64mm P.D. setting) \times 97 \times 294mm
Weight	4.5kg

Content of auxiliary lens dial:

“O/O” — Open Aperture

“R” — Retinoscopic Lens: +1.50D standard
+2.00D option

“P” — Polarizing Filter

“WMV/RMV” — Maddox Rod, vertical: white (left)
red (right)

“WMH/RMH” — Maddox Rod, horizontal: white (left)
red (right)

“GL” — Green Lens (left)

“RL” — Red Lens (right)

“+12” — +0.12D Spherical

“PH” — Pin Hole

“10 I” — 10 Diopter Prism Base In (left)

“6 U” — 6 Diopter Prism Base Up (right)

“ ± 50 ” — $\pm 0.50D$ Fixed Cross Cylinder

“OC” — Occluder

Plus and minus cylinder models available, also the choice of color—black or light grey.

Subject to change in design and/or specifications without advance notice.

IMPORTANT In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.