

PRESENTING . . .

**THE CUSTOM LINE OF
HIGHEST PRECISION**

Dynascopes



**MANUFACTURED BY THE CRITERION MANUFACTURING CO.
331 CHURCH STREET, HARTFORD 3, CONN.**

SPECIFIC DYNASCOPE ADVANTAGES

OPTICAL SYSTEM

The quality of optical performance depends on the characteristics of each element and its final coordination in an optical system. The optical systems of all Dynascope models listed herein are fully achromatic and will render perfect resolution. On nights of good seeing the Dawes Limit is easily reached and Dynascope owners frequently report exceeding the theoretical limits. To guarantee optical excellence, the optics are built with lavish care and then meticulously tested and re-tested before they are installed in a Dynascope.

MAIN MIRROR

Mirrors are exquisite paraboloids built to most exacting specifications by our master craftsmen. Surface far better than $\frac{1}{10}$ wave. Each is made of Pyrex in correct thickness, and in focal ratios that result in compact instruments capable of a broad range of observational use. Each is aluminized and overcoated to eliminate deterioration. Mirror is housed in a ventilated cushioned cell with three positioning adjustments. Ventilation has been carefully computed to allow least thermal interference. Entire cell is removable for mirror maintenance.

SECONDARY MIRROR

Elliptical, with sufficient surface area to utilize maximum illumination. Pyrex glass of proper thickness to eliminate surface flexure and thermal effects. Surface accuracy, $\frac{1}{10}$ wave. Aluminized and zircon quartz overlaid.

ANTI-DIFFRACTION SUPPORT

The secondary is mounted in a special circular support that eliminates the diffraction "spikes" caused by the conventional three and four vane type spiders. An increase in light also results. This special mounting has been thoroughly tested and is also used in the latest Government optical instruments. This feature makes the Dynascope the FIRST reflecting telescope capable of taking celestial photographs with minimum diffraction.

OPTICAL ADJUSTMENTS

All Dynascope models are equipped with alignment adjustments for collimating both the primary and secondary. The secondary is mounted in a brass cell, having lateral, angular, horizontal and vertical movements for adjustment. Alignment of both axes, whenever necessary, can be made to perfection.

EYEPIECES

A Matched set of five precision oculars is provided with each Dynascope. They have undergone exhaustive tests and meet the highest optical specifications. 1.250" diameter. The range of powers will cover a broad range of use from star work, to fine planetary detail, doubles, etc. Wide flat fields sharp to the very edge. Magnesium fluoride coated.

FINDER SCOPE

8 x 50, Achromatic, Coated. Extra wide 6 degree field. Cross Hairs. Brilliant clear views. Equipped with dew cap and end cover. Metallic grey finished aluminum barrel with polished chrome fittings. Double posted bracket with six adjustments for collimation. On all models.

DYNA-MESH RACK & PINION FOCUS

Satin Smooth focusing action permits hairline adjustments. Extensible draw tube to accommodate any eyepiece, positive or negative. Exposed focal plane for astro-photography. Precision gear drive with finely knurled hand wheels. Position is provided for attaching camera support.

FULLY ROTATING TUBE & COUNTER POISE

The Dynascope tube can be revolved at will to any position by slight pressure, placing the eyepiece at the most convenient viewing position, and stays without adjustment. Straining to reach the eyepiece is eliminated and group observations and prolonged study is accomplished in comfort. ALL Dynascope models, standard and electric, are equipped with the *fully rotating* tube arrangement. In addition, a *counterpoise* is installed to eliminate the unbalanced condition caused by the act of rotation. The convenience of fully rotating tubes on other commercially made telescopes becomes a tremendous inconvenience when the user finds he must continually readjust the main counterweight to offset the weight shift that occurs when the tube is turned. The Dynascope tube is dynamically balanced and eliminates this condition.

TUBE MATERIAL

Made of special type bakelite, and finest phenolic resins and is concentric for optical plane. Is virtually indestructible. Exceptionally light, it has far greater insulating qualities than metal, fiberglass and even ceramics. It will not change in extremes of temperature or "dry out" with time. This superior dimensional stability maintains alignment of primary and secondary axes. Extensively tested and approved.

EQUATORIAL HEAD

Heads of the 6 and 8 inch models are of aluminum; 10 inch models are of cast iron. All are adjustable to any latitude easily with adjusting screws. Hardened steel axles $1\frac{1}{2}$ " diameter. Polar axle rides in oversize precision ground needle roller bearings. So carefully have these important parts been machined and fitted that they move with the ease and precision of a fine watch without the slightest trace of unwanted instability.

ELECTRIC DRIVE

(Optional on standard models) Dynascope models equipped with the electric clock drive are ideal for group sessions, photography, and are easiest to operate. Once the object is centered in the field of view, drive takes over instantly and keeps it there accurately and for as long as desired. Self acting clutch engages and disengages drive without pause as different objects are sought for observation. Considered the most efficient and compact drive possible, it is fast starting, vibration free, absolutely smooth, and steady. (Prospective purchasers of our standard models will do well to consider including this much desired feature in their order.) Equipped with special type synchronous electric motor, AC 110/120 Volt 60 Cycle. Highest precision brass

and bronze gear train, fully compensating clutch. Adjustments are provided for clutch tension, back lash and wear thru-out the entire gear system if ever needed. Telescope can be operated manually without electricity at any time. Entire drive completely covered to eliminate dust, moisture, etc. Equipped with warning light, toggle switch, and 18 foot UL approved power cord. DC converter for field use available at additional cost.

TWO-WAY PIER-TRIPOD (Pat. Pending)

Every 6", 8" Electric Dynascope can be mounted in a permanent installation and still be used, whenever desired, for field trips. Attached to the equatorial head is a sturdy portable folding tripod. This tripod rests within the permanent pedestal and, by unfastening the holding screws, can be withdrawn in seconds. Since the telescope itself is also demountable from the tripod head, extreme versatility and portability is achieved. Permanent pedestal is 45 pounds, of cast iron for maximum rigidity, and finished in baked wrinkle black to resist weathering. Tripod has exclusive Criterion Tri-Lock legs guaranteed to keep legs from shifting, to prevent accidental collapse and to minimize vibration.

SETTING CIRCLES

(Optional on Standard Models) Made of choice aluminum. 7" Diameter. Spoked for easy setting. Mounted independent of drives for easy reading and adjustment. Hour circle is graduated to 4 minutes of time with verniers of two minutes. Declination is graduated in full degrees with $\frac{1}{2}$ degree verniers. Accurately scribed.

PORTABILITY

Dynascopes can be dismantled in minutes for transport. Telescope bodies are held in saddles with two generous hand wheels requiring only hand pressure for tightening or loosening. Equatorial heads can be taken apart at latitude segment. Entire instrument thus breaks down into three separate units easily. On permanent installations, Mounts can be left outdoors while telescope alone is brought indoors, minimizing the need for costly sheltering, and requiring only a canvas cover for the Mount. All telescopes are provided with waterproof end covers as protection in storing and to permit reasonable protection if telescope is left outdoors.

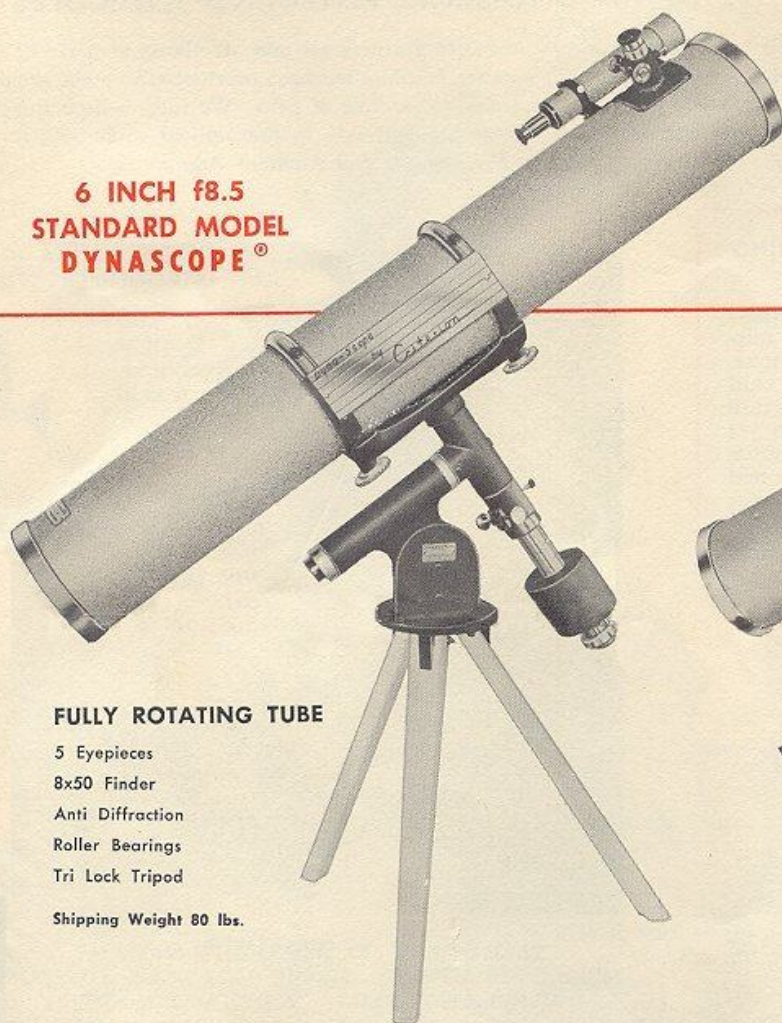
EASE OF OPERATION

Dynascopes are compact instruments requiring no steps or ladders, etc. to reach the eyepiece. 6 and 8 inch models can be used by anyone tall or short without the need of any height aids. And a short person may need the help of a small wooden box only when observing at zenith with the 10, 12, 16 inch models.

HANDSOME APPEARANCE

Unmatched for their rich, sparkling finishes and trim, professional lines, Dynascopes command attention wherever they are seen. Their rugged durability and fine design assure years and years of trouble free performance.

**6 INCH f8.5
STANDARD MODEL
DYNASCOPE®**



FULLY ROTATING TUBE

5 Eyepieces
8x50 Finder
Anti Diffraction
Roller Bearings
Tri Lock Tripod

Shipping Weight 80 lbs.

The 6" Standard Model is an extremely portable telescope designed for highest astronomical performance. Identical to the 6" DeLuxe except that Clock Drive, Setting Circles, and Pier are omitted. Tube is Fully Rotating. Tri-Lock (pat. pend.) tripod provides remarkable stability. Entire telescope can be disassembled and assembled in minutes. Pyrex parabolic mirror and elliptical diagonal aluminized, overcoated, and hand figured to better than $\frac{1}{100}$ wave. 5 eyepieces for 45X, 76X, 152X, 228X, and 343X. 8x50 Achromatic finder with cross hairs 6°, field Equatorial Head adjustable any latitude with simplicity. $1\frac{1}{2}$ " polar and declination axles in roller and thrust bearings. Vibration dampeners. Mount is finished baked black wrinkle and tube in smart instrument grey. Highly polished aluminum fittings and trim. Weight complete 68 lbs. Widely accepted for its versatility and advanced design, this telescope is ideal for the astronomer who requires a portable telescope of highest precision and ability. With traditional Dynascope precision, you can be sure of endless thrills and exhilarating observations. Every Dynascope is carefully built with the care only master craftsmen can give, is doubly tested and must be mechanically as well as optically perfect to pass inspection. Dynascope owners see more, see better. This remarkable telescope has features never before available, is rugged, scientifically correct, unconditionally guaranteed and an instrument you will be very proud to own indeed.

SPECIFICATIONS

Equipped with hardwood tripod legs.....F.O.B. factory **\$295.00**
Equipped with aluminum tripod legs.....F.O.B. factory **\$325.00**
Whenever desired, Clock Drive \$80., Setting Circles \$60., Permanent Pier \$70., Manual Slow Motion with Flex Line on Polar Axis—\$29.90 additional.

**6 INCH f8.5
ELECTRIC DE LUXE
DYNASCOPE®**



Dimensions

Tube, 7" dia., 53" long
Height at Zenith—50"
Weight with Pier—130 lbs.
Weight on Tripod—80 lbs.
Shipping Weight—150 lbs.

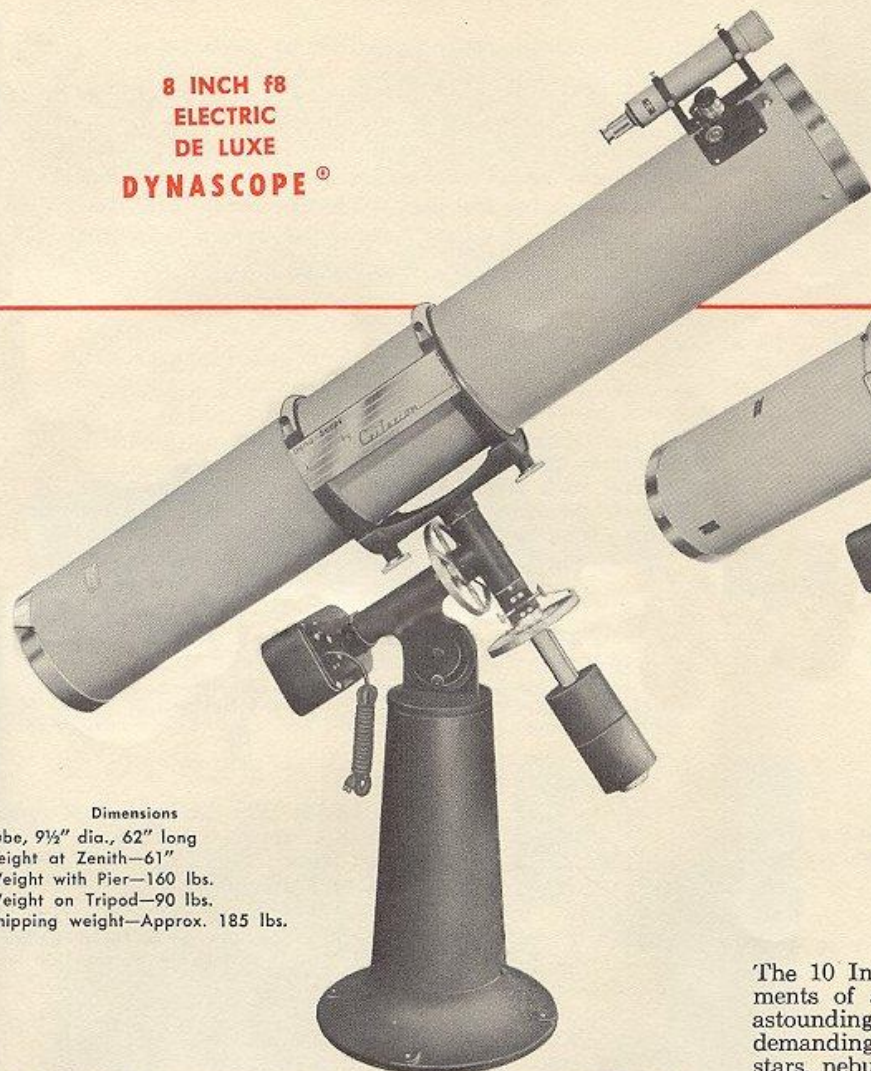
The 6" De Luxe Dynascope is really a masterpiece of advanced optical and mechanical engineering. All objects within the grasp of a 6" aperture are easily resolved with breathtaking detail. Everything needed for superlative viewing and ease of operation is provided. The massive mounting assures stability beyond compare and the instrument moves with incredible smoothness. Two Way Pier (pat. pend.) contains portable tripod for field trips. Entire instrument can be dismounted in minutes. Fully Rotating Tube, Electric Clock Drive, Setting Circles, and Rugged Pier mean efficient prolonged observations and group study. Exquisite f8.5 Parabolic Mirror and Elliptical Diagonal are superbly hand figured. Anti-Diffraction secondary support. Five highest precision oculars. Dyna-Mesh rack and pinion focuser with extra range adapter, exposed focal plane, and camera support station. $1\frac{1}{2}$ " Polar, Declination axles ride in needle roller bearings and roller thrust bearings. Head adjustable any latitude with simplicity. This superb telescope achieves the highest degree of stability and precision and is unexcelled for serious research in Variable Star, Lunar, Planetary, and general astronomical observations.

SPECIFICATIONS

Mirror—6", pyrex, parabolic, f8.5,	Eyepieces (5) 1.250 dia.
1346mm f.l., 1/10 wave, aluminized, overcoated	30MM Achromatic Ramsden.....45X
Diagonal-Elliptical, pyrex, 1/10 wave	18MM Achromatic Ramsden.....76X
Limiting Magnitude—13.3	9MM Achromatic Ramsden.....152X
Resolution—0.76 seconds of arc	6MM Orthoscopic.....228X
Finder—8 X 50, Achromatic, coated, 6° field	4MM Orthoscopic.....343X

6 Inch Electric Deluxe Dynascope Complete
F.O.B. Factory, Hartford **\$525.00**

**8 INCH f8
ELECTRIC
DE LUXE
DYNASCOPE®**



Dimensions

Tube, 9½" dia., 62" long
Height at Zenith—61"
Weight with Pier—160 lbs.
Weight on Tripod—90 lbs.
Shipping weight—Approx. 185 lbs.

8" De Luxe Dynascope models are ideal where greater light grasp is desired, having about twice the light grasp of a 6". Parabolic pyrex mirror is exquisitely hand corrected assuring utmost resolution to the limits of its aperture. Elliptical diagonal of same specifications and five highest quality oculars provide an optical system of excellent ability. Dynamic performance. Anti-diffraction secondary support. Equatorial Head adjustable any latitude with simplicity. 1½" dia. axles. Polar Axle rides in precision needle roller bearings and the entire instrument moves with delightful smoothness. Slow motion declination control 7" diameter setting circles. Fully rotating tube with rotation counterpoise. Permanent Pier with enclosed portable tripod. Electric Clock Drive. All these features make this an outstanding telescope for more ambitious astronomy programs, study of nebulae, galaxies, clusters, etc. With the portable tripod, surprising portability is achieved. On permanent installations, telescope itself can be brought indoors, leaving mount outside and undisturbed. Mount finished in black wrinkle, tube in smart instrument grey. Built to critical standards and rigidly tested to produce flawless visual and photographic resolution.

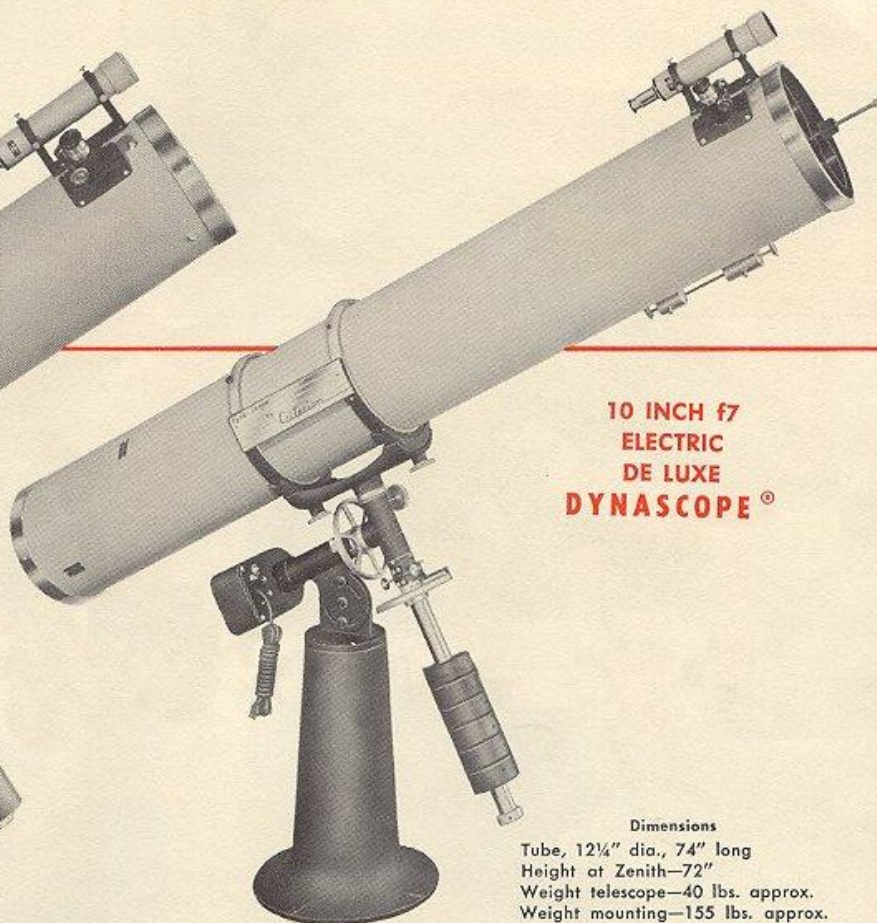
SPECIFICATIONS

Mirror—8", pyrex, parabolic, f8, 1625mm f.l., 1/10 wave, alumi- nized, overcoated	Eyepieces (5) 1.250 dia. 30MM Achromatic Ramsden.....55X 18MM Achromatic Ramsden.....90X 9MM Achromatic Ramsden.....180X 6MM Orthoscopic.....270X 4MM Orthoscopic.....410X
Diagonal—Elliptical, pyrex, 1/10 wave	
Limiting magnitude—13.9	
Resolution—0.6 seconds of arc	
Finder—8X 50, Achromatic, ctd, 6° field	

**8 INCH ELECTRIC DE LUXE DYNASCOPE COMPLETE
F.O.B. Factory, Hartford, \$595.00**

8 Inch Standard Model (Same as above but without Clock Drive, Circles, Pier).....\$385.00.
When desired, Clock Drive \$80. Setting Circles \$60. Permanent Pier \$70., Manual Slow Motion with Flex Line on Polar Axis—\$29.90 additional.

**10 INCH f7
ELECTRIC
DE LUXE
DYNASCOPE®**



Dimensions

Tube, 12¼" dia., 74" long
Height at Zenith—72"
Weight telescope—40 lbs. approx.
Weight mounting—155 lbs. approx.
Shipping weight—approx. 245 lbs.

The 10 Inch Electric De Luxe Dynascope meets the requirements of a research quality telescope of large aperture. Its astounding performance is especially evident in observations demanding the finest definition and resolving power. Variable stars, nebulae, galaxies, delicate planetary and lunar shadings superbly resolved. Its precision of movement and compact design enable comfortable observing. Chosen because of its overall precision, it is currently used on scientific research programs by the U. S. Government. The optical system is built to the highest degree of perfection. The classic 10" parabolic mirror is a perfect example of the mirror makers art and represents many hours of lavish, painstaking craftsmanship. Smooth automatic following makes group observations satisfying. Tube finished in instrument grey. Fully rotating and variably counterpoised. Telescope dismountable from saddle or mount so that shelter can consist of only a canvas covering for the mount, the telescope being brought indoors or some other storage area when not in use. Equatorial Head adjustable any latitude with simplicity, oversize roller bearings on polar axis, roller thrust bearings on declination. Cast iron pedestal assures maximum rigidity, and circular base permits rapid installation and facilitates location changes when desired. Declination fine setting adjustment. Unexcelled electric clock drive. 7" hour angle and declination circles with verniers to two minutes and ½ degrees respectively. Construction throughout is of lifetime weather resistant materials. Aluminum fittings and trim highly polished. Side plates act as carrying handles. This instrument is custom built to critical standards and achieves the highest degree of perfection for telescopes of its size.

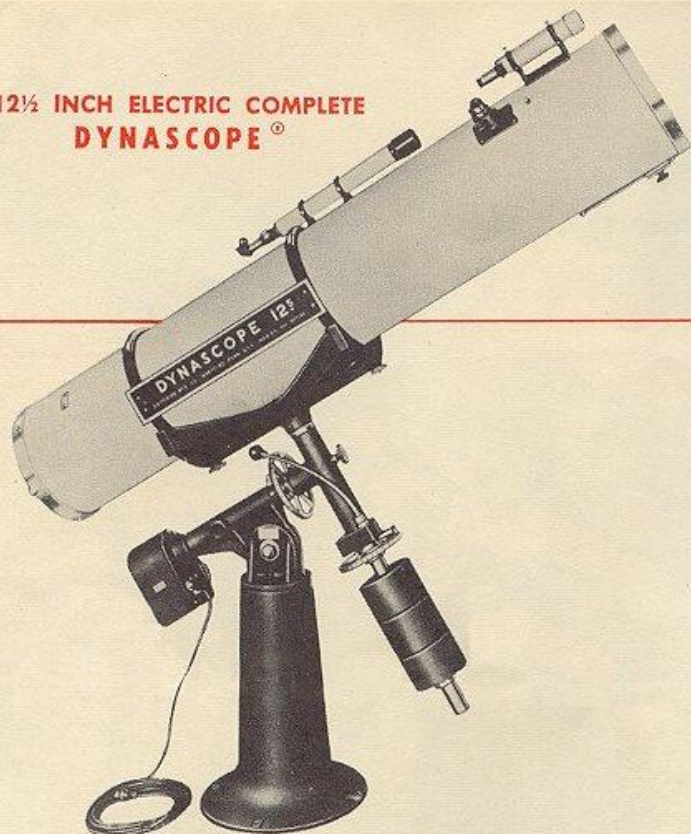
SPECIFICATIONS

Mirror—Pyrex, f7, parabolic, 1778- mm f. l., 1/10 wave, aluminized, overcoated	Eyepieces (5) 1.250 dia. 30MM Achromatic Ramsden.....60X 18MM Achromatic Ramsden.....100X 9MM Achromatic Ramsden.....200X 6MM Orthoscopic.....300X 4MM Orthoscopic.....450X
Diagonal—Elliptical, pyrex 1/10 wave, aluminized, overcoated.	
Finder—8 X 50, Achromatic, Coat- ed, Cross Hairs, 6° field.	

Telescope is completely assembled with Rotating Tube, Clock Drive, Setting Circles, Cast Iron Pedestal, End Covers and is fully tested.

**10 INCH COMPLETE DE LUXE DYNASCOPE
F.O.B. Factory, Hartford. \$895.00**

12½ INCH ELECTRIC COMPLETE DYNASCOPE®



The 12½ inch models are research instruments having those features most required by schools, colleges, universities and the advanced astronomer.

SPECIFICATIONS

Mirror: Parabolic, f6, to f7, surface accuracy better than 1/8 wave aluminized, overcoated, pyrex.

Oculars: Six 1¼ in. eyepieces are supplied as follows:

30MM Achromatic Ramsden.....75X	12.7 Achromatic
16.3 Erfle.....140X	Ramsden.....190X
9MM Achromatic Ramsden.....250X	6MM Orthoscopic.....370X
	4MM Orthoscopic.....560X

In addition a Goodwin Resolving Power lens is furnished

Finder: 8X 50 Achromatic, Coated, Cross hairs, 6 degree field.
Photographic Guide Telescope . . . 50MM or 2.4 at additional cost.

Tube: Fully rotating, 14½ inch dia, approx. 85 inch long, zenith 80°, variable counterpoises.

Equatorial Head: Cast iron, roller bearings, 7 inch setting circles, Electric Clock Drive.

Weight telescope alone, approx. 90 lbs., weight of mounting, approx. 260 lbs. Shipping weight 300 lbs. approx.

\$1,575.00 F.O.B. HARTFORD

16 Inch Observatory Model DYNASCOPE

SPECIFICATIONS

Mirror: f7, 6205mm f.l., Pyrex, exacting corrections, Parabolic, 16 inch aperture.

Tube: Fully rotating, 2 inch diameter eyepieces mount with adapter for 1¼ in. eyepieces, 18 in. diameter, approx. 102 inches long.

Oculars: (9), 30MM, 18MM, 16.3MM, 9MM, 7MM, 6MM, 4MM, Goodwin Resolving Power Lens

Finder: 10X62MM, achromatic, coated, cross hairs, and 2.4 photographic guide telescope

Mounting: Cast Iron pedestal, 12 inch setting circles, 4½ inch dia. axles, electric slow motions on both axes.

Clock drive: Electric 110, 120 volt, 60 cycle.

Delivery: Approximately six to seven months after receipt of order.

Note: While the other Dynascope models are normally delivered in two to three weeks, the 12½ in. requires approx. two months and the 16 inch six to eight months for delivery.

TRADE-IN-PLAN

Any 4 Inch DYNASCOPE, regardless of condition, can be traded in toward any of these Custom Line Dynascope models. In fact, any model Dynascope can be traded at any time toward a larger model. When writing, give date of purchase and price paid. A maximum allowance quotation based on time used, will be sent immediately. Another reason why it pays to own the one famous telescope used by thousands of Amateur and Professional Astronomers all over the world — the DYNASCOPE!

ACCESSORIES FOR ALL DYNASCOPE MODELS

All the Dynascope models listed are equipped with accessories that have proven their usefulness by long experience. As the interest and proficiency in telescopic observations increase, Dynascope owners may add other accessories, whenever desired. Listed below are a few.

50MM Photographic Guide Telescope (as shown on 12" model) with bracket...\$40.00

Goodwin Resolving Power Lens . . . a fully achromatic barlow that increases magnification three times of eyepiece used with it, and widens field...\$23.50

16.3 Erfle Eyepiece...75° field, for extreme angle views...\$18.50

7MM Achromatic Ramsden...\$12.50 18MM Huygens...\$12.50

8MM Orthoscopic...\$16.50 12.7 Achromatic Ramsden...\$14.50

SINGLE REFLEX CAMERA



Takes 35MM—Fits directly into Eyepiece Holder of all models. Ground glass shows clearest focus. Time exposure and all speeds to 1/500 second. Complete with adaptor, cable release, guarantee.

#CP-35 \$89.00 Postpaid

TRIPLE TURRET EYEPIECE HOLDER

Fits all models—Holds three eyepieces. Click stop for each position—Precision construction.

#RT350 \$14.50 Postpaid



SHIPMENTS.....Unless otherwise specified, telescope shipments are made via Railway Express, express charges collect f.o.b. Hartford, Conn. Shipping weights, because of the packing used, vary and are to be used as a general guide only. Instruments are crated and otherwise protected to insure safe arrival.

DELIVERIES.....Deliveries are made as quickly as possible, subject to existing conditions at time order is placed. 6, 8, 10, inch models are normally shipped within two to three weeks. Notice of delivery time will be sent upon receipt of order.

TERMS.....1/2 with order, balance COD, net cash, or time payment plan. Order blanks enclosed. Open account to rated firms, schools, colleges, universities, etc.

GUARANTEES.....All Dynascope telescopes are unconditionally guaranteed in respect to performance, construction, and individual components.

We also manufacture the famous smaller Dynascopes as well as a complete line of parts for the amateur telescope maker. Literature on request.

Dynascope® trade mark is registered U. S. Patent Office.
Criterion Manufacturing Company
331 Church St., Hartford, Conn.

Prices and specifications subject to change without notice.

THE CRITERION MANUFACTURING COMPANY

Manufacturers Of Quality Optical Instruments

331 Church Street, Hartford, Connecticut

Phone: CHapel 7-1696

Cable Address: "CRICO"

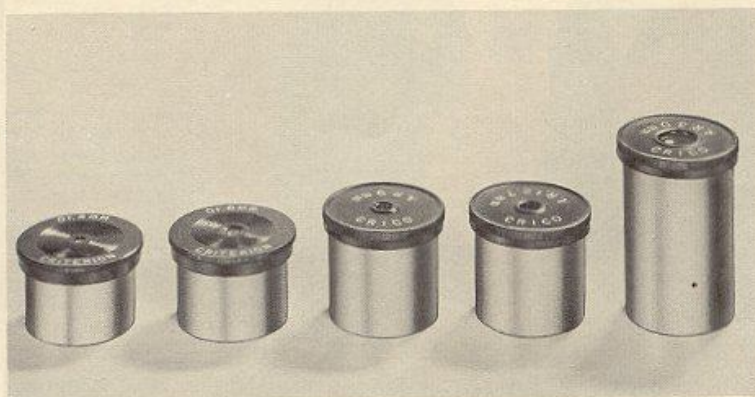
THE **HIGHEST PRECISION** 6", 8", 10", 12½", 16" DYNASCOPE REFLECTING TELESCOPES

These Superb Telescopes are custom crafted with one objective in mind . . . to provide the best possible telescope for the most exacting observer. Combining the latest advances in optical engineering with the skill and patience of master craftsmen, these superb instruments guarantee unexcelled optical and mechanical performance.

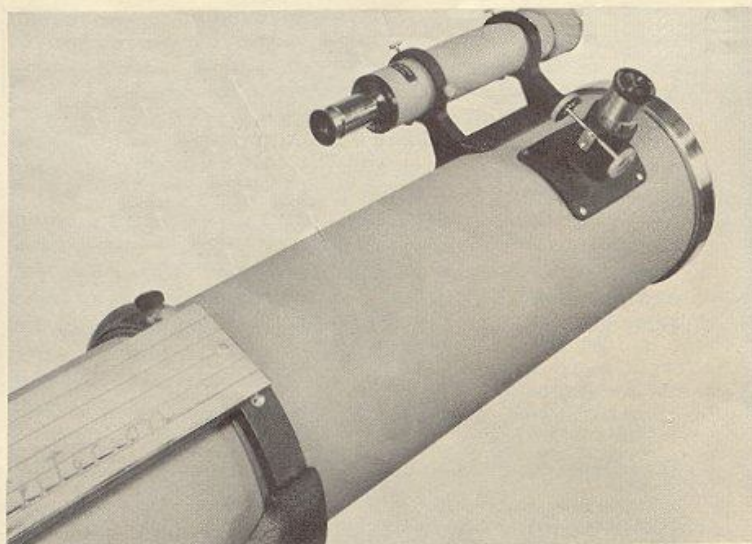
WHY THE DYNASCOPE IS PREFERRED BY DISCRIMINATING AMATEUR AND PROFESSIONAL ASTRONOMERS

The Criterion Manufacturing Company has long specialized in the manufacture of telescopes and has produced more telescopes of all kinds than any other present day manufacturer. This concentration of effort, experience, know-how, and skill has resulted in many very important advantages. Every feature of these fine precision telescopes is years ahead in design yet based on time-tested engineering principles. Countless hours of research, development, laboratory and field tests, combined with fine workmanship, guarantee that every Dynascope can be relied upon to give superior results in every way. Which-ever model you choose you are sure of owning the finest telescope in its class.

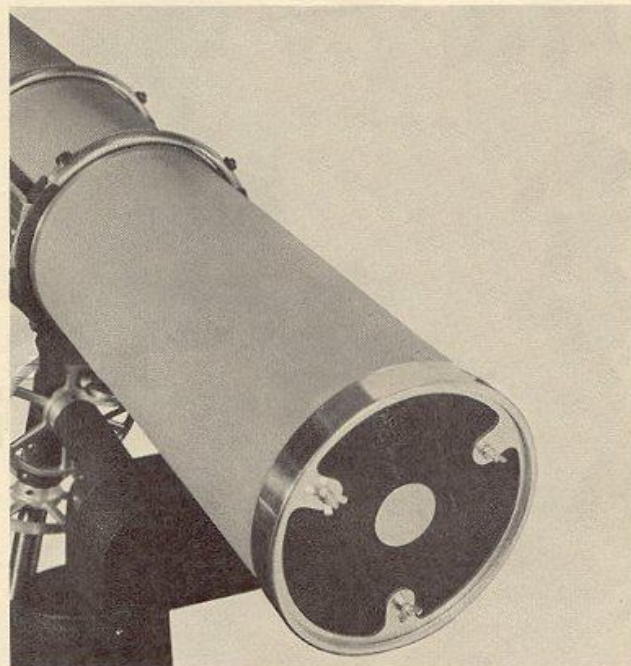
UNRETOUCHED PHOTOS ON THIS PAGE
SHOW SOME OF THE MAJOR FEATURES OF
THE 6, 8, 10 INCH DYNASCOPES.



THE MATCHED SET OF FIVE
PRECISION OCULARS SUPPLIED
WITH 6, 8, 10 INCH DYNASCOPES



VIEW SHOWING 8x50 ACHROMATIC FINDER
DYNAMESH EYEPIECE MOUNT
ON 6", 8", 10" **DYNASCOPE**



REAR OF 6", 8", 10" **DYNASCOPE** SHOWING
MIRROR ADJUSTMENT, HEAVY CAST POLISHED MOUNT,
VENTILATION PLUG, REMOVABLE MOUNT



ROTATING TUBE ARRANGEMENT ELECTRIC MOTOR
7" SETTING CIRCLES LATITUDE ADJUSTMENT
ON 6", 8", 10" **DYNASCOPE**