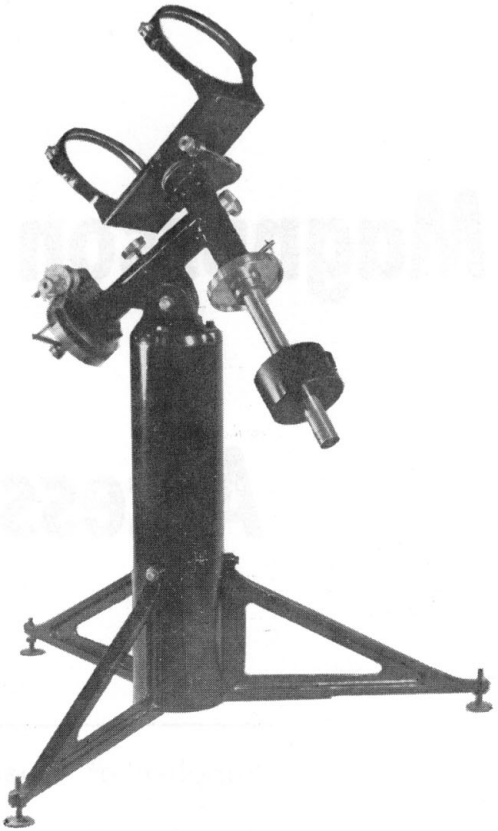
Magnusson Telescope

Accessories

Supplier of Quality Parts for
Both Amateur and Professional
Telescope Makers.

O. MAGNUSSON

14570 W. 52nd Ave.
Arvada, Colo.
Phone 279-4997



HEAVY DUTY MOUNTING

(Shown With Pedestal Stand)

This Heavy Duty mounting combines utility, stability, and beauty, and will enable the owner to make full use of his telescope. The ball bearings on polar axis permit the use of a small clock drive motor which is free from vibration and makes this mount a suitable instrument for photography. Shaft is extended to allow ample space for worm gear, setting circles and rotating pointer.

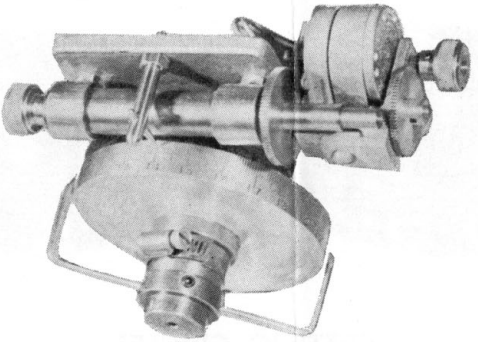
The new cast aluminum holding straps lined with felt permit easy tube rotation and safe removal of telescope.

OUTSTANDING FEATURES

1. Latitude adjustment.
2. 1½" x 20" declination shaft.
3. Ball bearing polar axis shaft 1 9/16" on north end x 12" long.
4. Extra large housings made for strength and stability 8½" long by 2½" in diameter.
5. 10-pound counter balance weight with thumb locking screw.
6. Locking screws on each axle, operating against brass shoes.
7. Weight approximately 45 pounds without pedestal stand.
8. Saddle made of solid aluminum with extra thick section in center for stability. Shaft screws into saddle with lock nut.
9. Mounting base suited for either pipe stand or tripod head.
10. Two cast aluminum holding straps lined with felt, made for standard size tubing from 5" to 12.2".
11. Housing machined to standard sizes on ends for adding clock drive torque plates.
12. Beautiful black enamel finish.
13. Pedestal stand supplied at slight additional cost.

PRICES

Plain heavy duty mounting without accessories but including 5" cast aluminum tube straps	**$106.00 F.O.B.**
Heavy duty mounting with 7" cast aluminum tube straps	**106.00 F.O.B.**
Heavy duty mounting with 9¾" cast aluminum tube straps	**112.00 F.O.B.**
Heavy duty mounting with 12.2" cast aluminum tube straps	**120.00 F.O.B.**
Six-inch pedestal stand	**34.00 F.O.B.**
Clock drive	**85.00 Ppd.**
Six-inch aluminum setting circles with mounting	**20.00**
Gear type fine pitch slow motion on declination, has 5¼" gear with 325 teeth and spring clutch	**40.00 Ppd**



CLOCK DRIVES

The Magnusson clock drive is made for very close sidereal tracking so that only a minimum of guiding is necessary during photography or observation with high power eyepieces. The ratio of 1436½ to 1 is much closer than the usual drive. In the Magnusson drive only a bare minimum of gears are used to prevent periodic errors and back lash. These are special gears with odd numbers of teeth. Stock gears cannot be used effectively. The 5" bronze worm gear is mated with a hardened and ground worm which can be turned by hand for slow-motion scanning.

There are two clutches on the Magnusson drive. One permits telescope to be turned by hand; the other permits worm to be turned for scanning. Either can be adjusted in a few seconds for the tension desired. The extended hub on the worm gear carries the hour circle which indicates sidereal time by means of a fixed pointer. Right ascensions are read directly, without calculations, by means of a rotating pointer on polar shaft. This system is far simpler to use than measuring hour angles.

A new feature added to the Magnusson drive makes it possible to rotate the 1 R.P.M.-drive motor backward or forward on axis of rotation for photographic guiding. It saves the expense and complications of differential drives or oscillators and amplifiers commonly used for this purpose.

Drives are made for 1", 1¼" and 1½" shafting and 2" to 2½" housings.

Prices are as follows:

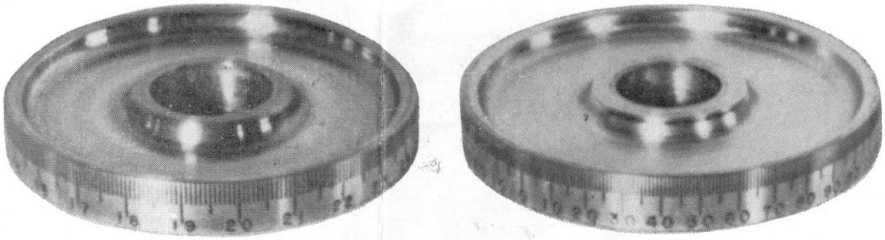
Regular drive for 4" to 10" telescopes	**$ 85.00**
Six-inch hour circle fitted to drive	**10.00**

(Includes plain sidereal and rotating pointers)
(State size of shafting and housing)

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SETTING CIRCLES

Setting circles are a necessity for the astronomer who wishes to make full use of his telescope and find interesting faint objects. Tables in astronomy handbooks and atlases list right ascensions and declinations of hundreds of objects that can be quickly located only by use of setting circles.

Magnusson setting circles, made of choice aluminum and brass, are machined and completely polished. Hour circles are machine-engraved in hour, half hour, and five-minute marks. Declination circles are machine-engraved in single degrees 0-90-0-90. Markings are indexed within a few seconds of arc. The markings on the aluminum circles are filled with black paint and very easy to read. Finer markings than the usual 5 minute and 1 degree spacing are very difficult to use and are not recommended except on large observatory-type instruments.

Prices are as follows: (Post paid)

	Aluminum	Brass
6" circles — set of two	**$20.00**	**$36.00**
8" circles — set of two	**28.00**	**48.00**

NOTE: Six and eight inch circles are made with 1½" holes. Holes can be bored out ¼" larger without destroying hub. Set screws are provided for fastening. Bushings for reducing standard size holes are available at no extra charge. Our standard pedestal-type pointers are priced at $3.00 per set. These are made with a ¼-20 screw base, and mounting housing must be drilled and tapped to accommodate same. State diameter of housing when ordering circles with pointers. Colorado residents add 2% sales tax.

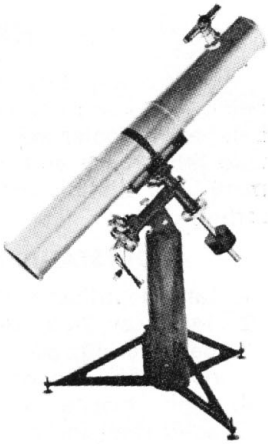
Each and every article is guaranteed to be exactly as represented.

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MAGNUSSON 6-INCH TELESCOPE



This six inch Magnusson telescope is suitable for serious astronomical work. It will gather more than twice as much light as a four inch refractor at less than half the cost. The guaranteed ⅛ wave mirrors are beryl-coated for durability. Made to f8 and f9 focal ratios, they are guaranteed to resolve double stars to the Dawes limit on good observing nights. Three of the finest oculars of ¼ in., ½ in., and 1¼ in. focal lengths are included with each telescope.

The aluminum tube with spun finish is treated to prevent tarnishing. It is semi-rotatable in felt linings. Aluminum rings prevent the tube from sliding when strap is released. In an adjustable mount, a finder scope of 8 in. focal length and 1 in. diameter is fixed to the tube.

Fine adjustment while bringing objects into the field is made easier by slow motion control on each axis. The synchronous motor for the clock drive operates on standard house current. For field trips, an adapter which plugs into the cigarette lighter of a car, may be obtained. The smooth motion of this drive provides steady viewing and suits the telescope for photography.

The solid mounting helps to make the Magnusson telescope an instrument of excellent quality. For details on mounting see page 2.

The telescope is completely portable and can be assembled or disassembled in a few minutes. The heaviest single part is the mounting which weighs 38 pounds. Total weight is approximately 90 pounds.

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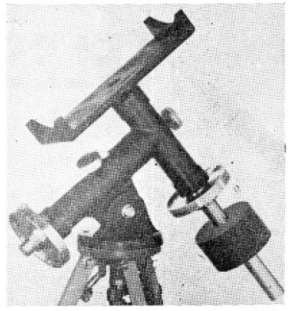
14570 West 52nd Avenue

Arvada, Colorado **Telephone CR 9-4997**

HEAVY DUTY MOUNTING

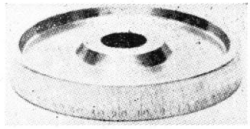
This heavy duty Magnusson mounting combines utility, stability, and beauty, and will enable the owner to make full use of his telescope. The ball-bearing polar axis makes possible a small clock drive unit which will take little space and will not detract from the portability of the instrument. The shaft is extended to allow ample space for worm gear and setting circles.

OUTSTANDING FEATURES:



1. Latitude adjustment.
2. 1¼ in. by 24 in. declination shaft.
3. Ball-bearing polar axis shaft 1½ in. on north end, 1 in. on south end x 12 in. long.
4. High tensile aluminum castings with solid steel shafts.
5. 11 pound cast iron balance weight.
6. Locking screws on each axle.
7. 5 inch brass setting circles with pointers.
8. Weight approximately 38 pounds.
9. Saddle custom made to fit your telescope.
10. Pedestal base fits over pipe stand or tripod head.
11. Holding strap on center of saddle is made to correct measurement for your telescope (Not shown in cut).
12. Aluminum housings are machined to exact measurement on end bells for adding slow motion and clock drive torque plates for future use.
13. Choice of gray hammertone or black finish.
14. Tripod legs supplied at slight additional cost.

SETTING CIRCLES



Add to the appearance and utility of your telescope with a pair of setting circles. Magnusson setting circles are made of choice aluminum and brass castings machined and completely polished. Hour circles are machine-scribed with hour, half hour, and five minute marks. Declination circles are scribed in degrees 0-90-0-90. Markings are scribed and indexed with a precision dividing head and are guaranteed accurate. Holes will be bored to fit your telescope. (State sizes.)

These circles are made of only the finest materials and to a high standard of workmanship. They are used on some of the finest instruments advertised in "Sky and Telescope".

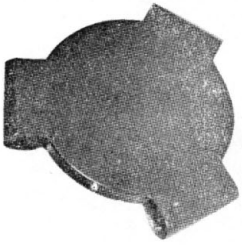
Magnusson circles may be used on electronic equipment as well as telescopes. A full set of instructions for attaching them as well as adjusting the mounting is included with each set.

SPIRAL FOCUSING EYEPIECE HOLDER



Made to fit your telescope. (State tube diameter.) Insert can be pushed in or out for quick focusing and turned slightly for fine adjustment.

Made of aluminum and blackened on inside. Fits 1¼" eyepieces.



TRIPOD HEAD

Just what you need for making your own tripod.

Designed for heavy duty mountings and unsurpassed for rigidity.

Round part 6 inches in diameter and lugs 2⅝ inches wide. Lugs drilled for ⅜ inch bolts.

TORQUE PLATE



Used as mounting base for worm or tangent screws on slow motion or clock drive.

Made for gears of 3⅝" to 5" in diameter.

Will fit over polar or declination axis housings of 2½" diameter.

Can be fitted to smaller housings by using bushings.



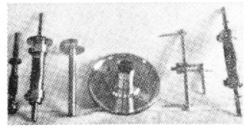
MIRROR CELL

Made of high tensile aluminum for strength and lightness.

Spring loaded for easy adjustment.

Made for 6-inch mirror with 7 inch O. D. tube having 3/32 inch wall.

CUT SHOWING PARTS FOR MAGNUSSON CLOCK DRIVE AND SLOW MOTION



1. Declination worm with ball bearings.
2. Clock drive worm and housing with spur gear.
3. Handle for turning either worm in slow motion.
4. Bronze clock drive gear.
5. Rotating pointer reads right ascensions directly.
6. Sidereal time pointer.
7. Declination worm and housing. Worms and gears can be bought separately.

CAST IRON LAPS



The oversized cast iron lap is a new deal for the mirror maker. The 7" diameter lap for grinding 6" mirrors has the following advantages over the regular glass laps:

1. Faster grinding: The oversized lap permits much longer strokes over more abrasive material.
2. Better control of focal length: Oversized laps will retain their curvature over longer periods, and stroke can be varied to lengthen or shorten focus at will.
3. Better finish: Mirrors ground on cast iron laps will polish in about half the usual time.

Laps can be bought or rented for a small fee to cover packing and postage. A deposit will be required to cover cost of lap. Laps weigh about four pounds. They can be made with hubs for spindle mounting. Templates furnished with laps. (State focal length desired).

CAST IRON BALANCE WEIGHTS

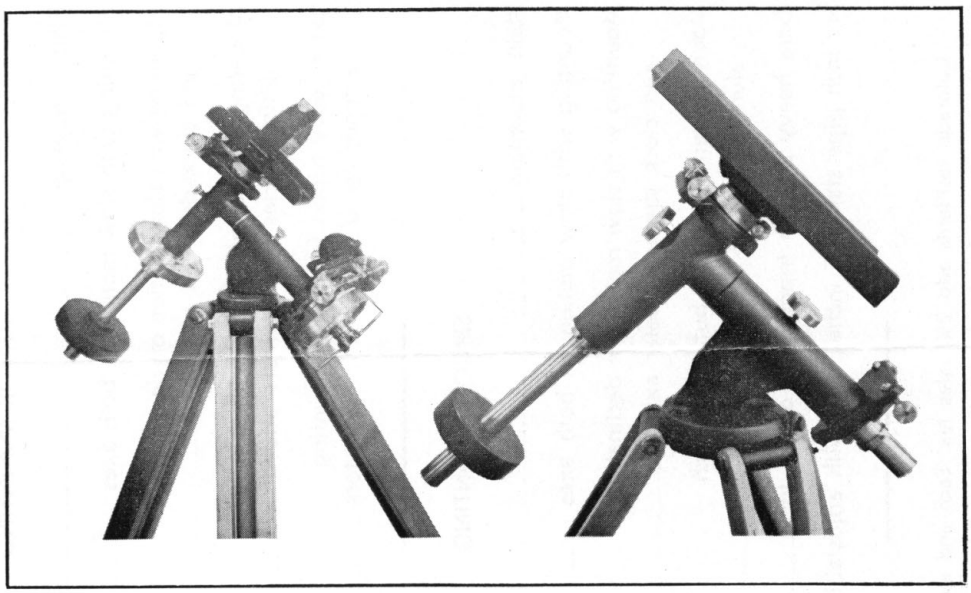
6 pound cast iron weights are made with holes to fit your declination shaft. (State size of shaft.) Two weights used on telescopes over 4".

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JUNIOR MOUNTING

Here is a mounting for small refractors up to 3 inches or reflectors up to 4½ inches. This sturdy mount with ¾ inch solid steel shafts makes an ideal set-up for easy portability. Fitted with slow motion on both right ascension and declination, it is much easier to adjust accurately than the average mounting. This makes it ideal for photography.

Mounting can be fitted with setting circles and new simplified clock drive at a very low cost. The clock drive has been developed especially for this mount and is geared to take care of atmospheric refraction. The 1 R.P.M. motor driving the gear mechanism can be run on commercial or converted battery current. It is made the same as drive on new senior mounting but with smaller parts. Sector gear on polar axis will run for four hours before resetting. It takes only about 10 seconds to reset gear by using the slow motion control knob.

Features include:

1. Latitude adjustment
2. ¾ inch solid steel shafts
3. Bronze bearings
4. Locking screws on both shafts
5. Weight approximately 11 pounds
6. Saddle fitted with holding strap (State size of tube)
7. Pedestal base which will fit over 3 inch pipe or tripod
8. Polar axis extending far enough for clock drive, setting circles and pointer
9. Beautiful silver-grey hammertone finish.

SENIOR MOUNTING

This mounting is made for the economy-minded telescope maker who wants a strong vibration-free mount at a very low cost. Although it was made especially for telescopes from 4 to 8 inches, it will handle telescopes of much larger size if the focal length is short and light tubing is used.

Illustration above shows mounting equipped with tangent screws for slow motion in declination and right ascension.

Features include:

1. Latitude adjustment
2. 1¼ inch solid steel shafts
3. Bronze bearings
4. Locking screws on both shafts
5. Weight approximately 40 pounds
6. Pedestal base that will fit over 6 inch O. D. pipe or our heavy duty tripod head
7. Polar axis which extends far enough for clock drive, setting circle, and rotating pointer
8. Beautiful silver-grey hammertone or black finish (state preference)
9. Saddle base fitted with either 3, 4, or 5 inch channel to fit your telescope tube (state size of tube).

A newly developed clock drive to sell at an astonishingly low price can be fitted to this mount. Synchronous motor will run on commercial or battery converted current. Sector gear on polar axis will run for 4 hours with one setting. Made to 1436½-to-1 ratio to take care of atmospheric refraction.

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Price list of new mountings and accessories

(Prices subject to change without notice)

JUNIOR MOUNTING

Plain mounting	$ 29.00
Mounting with slow motion on both axes	54.00
Mounting with slow motion on declination and clock drive on polar axis	80.50
Mounting same as above but with 4 inch setting circles and pointers added	95.00
Extra heavy tripod for above mounting extends up to 72 inches for refractors	25.00

SENIOR MOUNTING

Plain mounting	$ 59.00
Mounting with slow motion on both axes	89.00
Mounting with slow motion on declination and clock drive on polar axis	133.00
Mounting same as above but with 5 inch aluminum circles and pointers added	148.00
Extra heavy 30 inch tripod with 6 inch top	18.00
Six inch pipe stand 25 inches high with adjustable legs	29.00

Colorado residents add 2% sales tax. Each and every item is fully guaranteed. If you are not delighted with the performance and workmanship of any **Magnusson** product, send it back within ten days and your money will be refunded. All prices are F.O.B. Arvada, Colorado.

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Arvada, Colorado

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Telescopes and Parts Price List

SETTING CIRCLES

	aluminum	brass
5" circles, set of two	$15.00	$19.50 ppd.
6" circles, set of two	17.00	22.10 ppd.
8" circles, set of two	24.00	31.20 ppd.

Aluminum spiral focusing eyepiece holder	$ 9.50 ppd.
6" mirror cell	6.50 ppd.
6" mirror - beral coated - f8 - 1/8 wave	55.00 ppd.
Tripod head	6.00 ppd.
Cast iron counter balance weight	6.00 ppd.
Mounting to fit your telescope (state size of tube)	96.00 F. O. B.
Mounting with 5" brass circles and pointers	125.00 F. O. B.
Slow motion on declination	50.00 ppd.
Clock drive with 1 R.P.M. synchronous motor	75.00 ppd.
6" pedestal base with adjustable legs	29.00 F. O. B.
30" tripod legs for tripod head	18.00 ppd.
Torque plate for 5" gear and worm	5.00 ppd.
Cast iron lap for 6" mirrors	13.00 ppd.

Complete telescope with 1/8 wave optics, mounting, clock drive, slow motion, setting circles, 6" pedestal stand, finder, three eyepieces ready to use. F.O.B. Arvada, Colorado **$462.00**

Magnusson clock drives can be attached to any mounting using 1 inch shaft on south end of polar axis, or axis that can be cut down. Torque plates are made with 2½" holes for mounting over end of housing. Adapter bushings can be made for smaller housings. Housing must be accurately machined and measured.

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