

OMC 300

SUB APERTURE **Maksutov Cassegrain**

300mm F9 Photo Visual Optimised
Designed specifically for Visual and CCD use
for Deep Sky, Planetary and Lunar observation



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overview

The OMC300 has a compact high resolution tube and the substantial, fully computerised, Vixen Atlux mount and Tripod are undeniably one of the best combinations available in terms of reliability, quality, accuracy and price. (See back page for Atlux specifications).

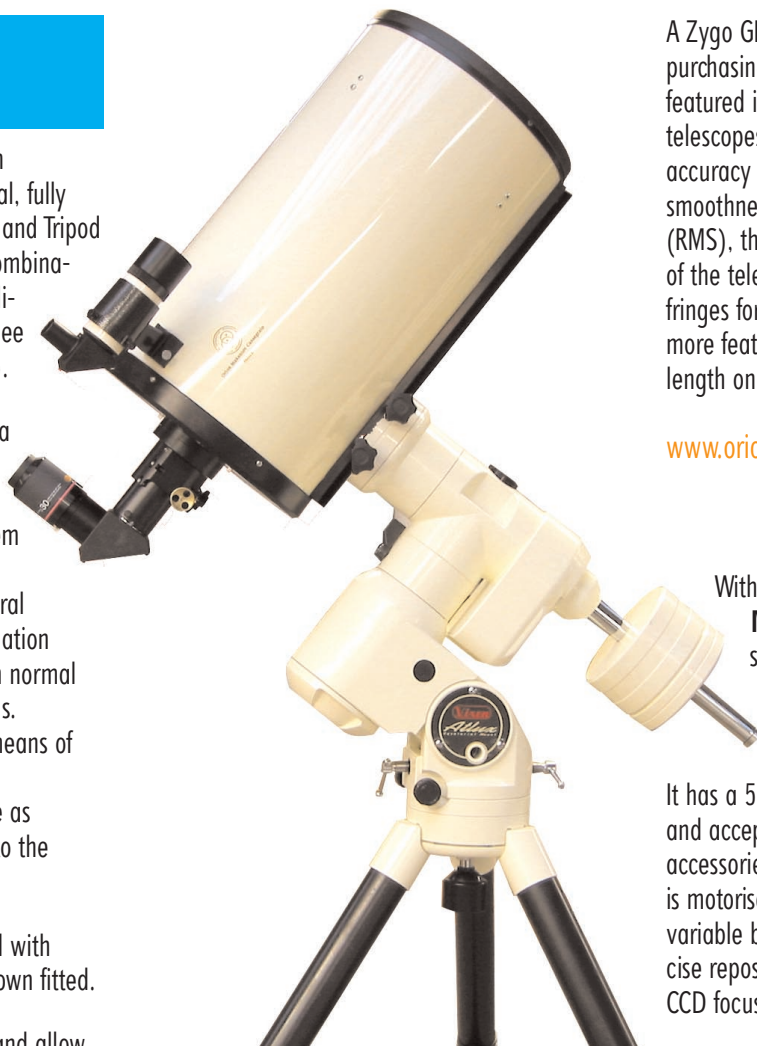
The four vane stainless steel, ultra rigid spider is held and collimated by our revolutionary, (probably soon to be copied), PCS system for accurate, reliable collimation. PCS, Peripheral Collimation System, allows collimation several times more accurate than normal SCT and other Cassegrain systems. Collimation is precisely held by means of the PCS geometrically designed components, ensuring images are as perfect from one nights viewing to the next.

Optional 1/10th PV Star Diagonal with Vixen 2" Lanthanum eyepiece shown fitted.

Two dovetail receivers are fitted and allow either the attachment of a 50mm finder (supplied) or, a camera for direct sky photography. Both are interchangeable.

optical manufacture & interferometry testing

To ensure we maintain and continue to improve our quality levels to achieve virtually as good an optical system as can be produced by any method available to science, we have invested heavily over the last three years in both specialist polishing machines, high reflectivity coatings and precision testing equipment. Our most recent acquisition is a new GPI Zygo Laser Interferometer. Zygo interferometers are one of the world's leaders in laser testing technology and we decided three years ago to invest in a MKIV model which enabled not only our quality levels to significantly increase but also to assist in polishing techniques and aid our design processes.



A Zygo GPI report issued to customers purchasing the higher grade optics featured in our higher specification telescopes. Reports show the PV wavefront accuracy in your telescope optics, the smoothness of the surface, the Strehl value (RMS), the overall view of the 'topography' of the telescopes wavefront, interference fringes for the whole telescope and many more features, all of which are covered at length on our web page at

www.orionoptics.co.uk/Zygo-info.htm

With the collaboration of **Jim's Mobile** we have introduced a specialised focuser for the OMC300 as an optional extra and is pictured above. (DRO-NGF-C-Orion-Optics)

It has a 5.75" (146mm) draw tube travel and accepts 2" and 31.7mm eyepieces and accessories. Included with the NGF focuser is motorised focusing and, an illuminated, variable brightness, digital read out for precise repositioning, especially useful with CCD focusing.

The latest GPI series of interferometers will allow us to test and identify errors so small as to be virtually beyond recognition by anything other than an electron microscope, just a few atoms in size. Please take a minute and look at Zygo's web page and, if it interests you, view the whole web site and you will appreciate the efforts Zygo put into measuring surfaces, very accurately. www.zygo.com.

Shown below is our Zygo GPI laser interferometer in operation measuring a small optical component. To achieve the accuracies need for consistent quality levels, there is no substitute for interferometry. Nothing even comes close to the accuracies which can be achieved by including instruments as the Zygo GPI in an optical testing laboratory.



Quality Crayford Focuser.
50mm finder, right angled
or straight.
Full length dovetail plate
on tube.

Fixed primary - mirror rock and
image shift - gone forever!



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Pictured above is the optional NGF Crayford
focuser with electric focusing and, DRO.
Digital read out, to ensure rapid and exact
focusing for images on CCD chips
or for eyepiece use.
Precision to fractions of a
millimetre are possible.

Guaranteed $\frac{1}{4}$ PV wavefront optics
and Hilux coatings

OMC

300

basic specifications

**Guaranteed $\frac{1}{4}$ PV wavefront optics
and Hilux coatings**

1. 300mm aperture with secondary mirror obstruction of 31%.
2. Open, air cooled cell for rapid cooling. Rotatable vent cooled for easy covering when ambient temperature achieved.
3. No full aperture corrector plates at the open tube end. On a large aperture, doomed to dew and totally disrupted images. Sub aperture corrector plate allows cooling and stabilising of image up to 5 times faster than closed tube designs.
4. Focal ratio f9, focal length 2700mm.
5. Quality Crayford Focuser, also available NGF Electric focuser including digital read out for precise repositioning. Essential for consistent CCD imaging.
6. Weight 13kg), 29lbs.
7. Four vane (2mm stainless steel section) secondary support.
8. Fixed primary. Means that mirror rock and image shift on competing traditional designs, especially SCT's, gone forever, guaranteed.
9. 220mm back focal length. Enough for virtually any accessory considered. Even if you have a non standard accessory, PCS allows you to easily adjust the focal plane to suit your exact needs.
10. Coupling of NGF digital focus mount (if fitted) to cell by means of a removable and interchangeable collar.
11. Diffraction limited for 10mm field, maximum of 40 micron spot size at 20mm field. Basically, incredible in visual observing and also, gives outstanding CCD image quality with some of the largest CCD chips available.
We combined the 'wish lists' of many world renowned and respected CCD users and, designed many of the telescopes parameters around their comments.
12. Full length dovetail plate on tube to suit standard size dovetail receivers. Larger dovetails available.
13. Collimation mechanics 'fool proof'
14. Good secondary cover with space for silica gel compartment.
15. 50mm finder, right angled or straight.
16. Field focal reducer to f5, as an option.

OMC
models
available



OMC350



OMC300



OMC250