

**Zenithstar 66 Semi APO 4
Element Refractor**

Tommi Worton 01 June 2005



This new design of 66mm aperture F6 refractor features a 4 element Petzval optical design that includes one ED element and provides a sharp and flat field of view with virtually no false colour.

The Petzval design consists of two widely separated doublet lenses which are constructed so as to compensate one another's aberrations and produce a better focus than any single doublet can.



Upon unpacking the scope the OTA and additional components are presented in a well made foam lined carry case with carry handles and shoulder strap. The whole bundle felt light enough to carry around for long durations without any problem, the whole package weighed in at around four pounds, light enough to make it a decent travel scope.



Opening the case and viewing the OTA for the first time gave me a sense of anxiety as I really wanted this little beauty to live up to the well know high standard of the other Williams Optics scopes I have owned. With its UK price tag of £249 I was not really expecting much.

How wrong I was, the build quality of the Z66 was stunning. The OTA is coated in a shiny black anodized finish with silver anodized fittings. It has a retractable dew shield and when closed measures only 34cm in length, even the silver dew cap is excellent quality and a good fit. There is a tripod mounting shoe fitted to the bottom of the tube.



It has the smooth Rotatable Crayford focuser which is a particularly good feature to me as I intend to use it for CCD imaging and this will allow me to change the orientation of the camera with ease.

The Crayford style focuser is unbelievably ultra smooth with no mechanical defects felt what so ever. Apart from the Starlight Instruments Crayford this is probably one of the best I have ever used and believe me I have tried a few in my time. There is 6cm of travel which is ample enough to bring most 1.25 eyepieces to focus, there is also enough back focus to bring a CCD into the focus plane.



I discovered that the 1.25 eyepiece/ diagonal fixing point at the back of the focus tube can be unscrewed to reveal a standard SCT rear thread. This got me thinking so I went out to the observatory and grabbed a handful of equipment.

I had a standard SCT visual back that I managed to screw directly to the revealed SCT thread on the focuser, this allowed me to use my 2" diagonal and of course the 2" eyepieces. At the time of writing this article I have not tried the range of 2" eyepieces with diagonal to see which will come to focus.



After removing the diagonal I fitted one of my filter wheel/CCD combo straight into the back of the SCT visual back. The focuser seemed to cope with this quite well but I need to try it for real before I can comment any further on this. Any of the Meade/Celstron focal reducers will also screw directly back to the focus tube which is pretty useful for anyone wanting to do very wide field imaging.



Also included is a 20mm WO Swan eyepiece with 72 degree apparent field of view and a 1.25" erect image diagonal. The build quality of these items is to the same high standard as the scope itself. The diagonal has a brass compression ring which helps to protect the supplied black anodized eyepiece from set screw marks.



As I have not had this very long, my visual tests have been very limited because of lack of darkness and too much cloud. Pointing directly at some stars and bought to focus with the supplied eyepiece the stars appear very tight with very little to no coloration visible. A look at Jupiter shows its four moons as razor sharp points and the planet itself has excellent banding detail visible with only a very small amount of coloration visible but no more than I get from two other manufactures non fluorite scopes that I own at twice the price.

I will be testing this scope as much as possible in the next few weeks both visually and with the CCD camera to see what its maximum potential is, I just have this good feeling about its performance but time will tell.

Likes

Quality of the build. Rotatable focuser. Large focus knobs. Ability to use SCT equipment. Lastly and most important the price.

Dislikes

None at the moment

At the time of writing this article I only know of one UK supplier of the WO Z66, Ian King Imaging. <http://www.iankingimaging.com/index.php>

This scope will make a very good choice for very widefield CCD imaging or as a super little ultra portable travel scope.

Thanks for reading, Please contact me with any questions.

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