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The GSO Dobson 16 "TRUSS DeLuxe 406/1800 M-CRF telescope is equipped with a high-quality main mirror with a rotary paraboloid shape, diameter 406 mm and focal length 1800 mm (light f / 4.45) in an openwork, open design. The GSO factory is a recognized provider of high-quality optics with limited diffraction quality (meaning the quality of images is limited only by the nature of light.) The telescope allows to obtain excellent images of both solar system objects and star clusters, nebulae and galaxies. The typical, simple Dobson telescope concept has been optimized in the GSO DeLuxe series telescopes through the use of a number of useful design improvements. Observation possibilities. The GSO Dobson 16 "TRUSS DeLuxe 406/1800 M-CRF telescope is a universal tool for carrying out highly advanced visual observations of all types of astronomical objects, which works well in all observational conditions, but - as any astronomical telescope - loves the dark, rural skies and under such a sky will show the most. The telescope with the diameter of the main mirror equal to 16 inches (over 40 cm) is basically the maximum possible visual observations available to amateur observations. It is difficult to enumerate all observation options - let us only list the most important ones: ∅ craters on the moon, shadows on impact craters, unprecedented detail and plasticity ∅ Mercury and Venus phases, Venus belts with good atmospheric stability ∅ ice caps on Mars are perfectly visible (it is worth buying red, orange, yellow filters) ∅ stripes in the atmosphere of Jupiter with their structure, both "tropical" and circumpolar, the Great Red Spot, four Jovian moons, the shadows of moons on the surface of the Jupiter's shield ∅ Saturn ring with Cassini break and Encke break, belts, ring shadow on the planet's face ∅ Uranus and Neptune shields, certain structures in the atmosphere of these planets ∅ asteroids ∅ comets - ice lumps traversed by the solar system - the telescope can serve as the perfect "comet finder" ∅ hundreds of double stars, multiple stars and variable stars, including observations about scientific values ∅ several thousand Deep Sky objects, including all from the Messier catalog, as well as the majority of NGC, IC and the Caldwell catalog; open clusters will be visible, such as Crib in Raku, hi chi in Perseus or Gromada Ptolemy in Skorpion, globular clusters (M13 broken up to 1/2 diameter on single stars, or M53 in Barkniki's Warkocz), gas and dust nebulae (perfectly visible structure M42 in Orion, North America in Cygnus), galaxies (M31 in Andromeda with two satellite galaxies, ie M32 and M110), as well as Veil in Łabędziu or the famous Ring (M57) in Lutnia and many, many more. Tube The main mirror cell made of metal has 18 optimized support points. As a result, the telescope maintains its collimation for a long time. Dobson's assembly The weight and dimensions of the telescope are acceptable in relation to the observation possibilities and the size of the mirror - the tube is located in most Kombi and SUV cars. Thanks to the openwork construction (truss), the telescope, despite a 40-cm mirror, is not more difficult to transport than 30cm Newton's telescopes with a closed tube construction. Using the telescope is very simple and there is no problem with folding and handling by one observer. Just like any telescope on Dobson's box assembly, the object is positioned in two axes - azimuth axis (level) and height (vertical). They differ from the competing solutions by far better bearings in the azimuth - they are roller bearings, guaranteeing, on the one hand, smoothness and lightness of the "walking" of the structure, and on the other - higher precision of the setting. Metal bearing tracks prevent biting into the assembly wood, thanks to which a high durability of the assembly structure was achieved. There is a new bearing system developed by GSO in the height axis. The telescope is guided and held by two handles. The desired pressure is adjusted using the knobs on both sides of the assembly. This is especially helpful when changing the eyepiece to maintain position and balance. In addition, the telescope has the ability to adjust the balance by changing the mounting height. Eyeglass extractor The telescope is equipped with a high quality Crayford's microfocus puller with a gear ratio of 1:10. Thanks to this, the focusing is very precise even at high magnifications. The extractor is designed for 2 "and 1.25" glasses Advantages of the Crayford spectacle: ∅ much smoother and more precise movement when setting the focus compared to simpler sliding and rotating pulls ∅ thanks to the use of a brass ring (clamp ring), the fixing of the glasses becomes more reliable, the axiality is perfectly maintained, and the surface of the eyepiece sleeve is also avoided. Cooling the main mirror The telescope is equipped with a 12V fan mounted at the end of the tube, which when turned on greatly speeds up the leveling of the telescope's mirror with the ambient temperature. Set ∅ openwork optical tube, mounted on Dobson with ball bearings ∅ Crayford extract with a micrometer 1:10 ∅ Erfle wide eyepiece 30 mm (AFOV 70 °) / 2 "and Plossla eyepiece 9 mm (AFOV 52 °) / 1.25" ∅ 8x50 finder with a cross ∅ fan speeding cooling ∅ shelf for accessories ∅ rail for adjusting the center of gravity OFFERED TELESCOPIC LINKS TO START OBSERVATIONS IN THE FIRST FRONTLIGHT OF NIGHT - INCLUDES ALL NECESSARY ACCESSORIES, OPTICAL OPTICAL TUBE OPTION, SET WITH GLASSES AND DOOR INSTALLATION Usage Moon the planet star clusters nebulae planes Technical parameters ∅ Optical system: Newton's headlamp ∅ Diameter of the mirror: 406 mm ∅ Focal length of the lens: 1800 mm ∅ The efficiency of the reflecting surface: 94% ∅ Lighted: 1 / 4.45 ∅ Accuracy of the mirror's performance: 1 / 8? ∅ Mirror glass type: BK7 ∅ Switching capacity: 0.35 seconds of arc ∅ Star range: 13.5 magnitude ∅ Maximum useful magnification: 800x ∅ Dimensions in factory boxes + weight: 1. main mirror: 62 x 62 x 41 cm, 10 kg 2nd tube: 75 x 63 x 63 cm, 35 kg 3. basis: 93 x 93 x 21 cm, 32 kg ∅ Weight: 58 kg (tube: 33 kg, assembly: 25 kg) Warranty 2 years Additional photos >> FREQUENTLY ASKED QUESTIONS << Question : Is the mirror from Pyrexu? Is there a version with a Pyrex mirror? Is BK-7 Pyrex? Which is better, Pyrex or BK-7? Why is the mirror not made of Bak-4 glass? Answer: Pyrex is the commercial name of boron-silicon offered by Corning. Many companies offer glass with the same composition and parameters, but often the name Pyrex is used to describe the borosilicate glass (a bit like sports shoes are called sneakers). The characteristic feature is that the glass has an expansion coefficient of about three times lower. From the point of view of the astronomy lover, its advantage is to reach the figure a little faster when the telescope is cooled down, for example after moving from the house to a frosty yard. It should be noted that the use of Pyrex in amateur telescopes (6 " - 16") is not necessary, because these mirrors are quite thin and they cool down quickly. At the same time the mirror image, reaching the proper figure by it, is not everything - also the tube has to reach the ambient temperature, otherwise there are turbulences inside the tube, and the image will be of low quality. In practice, it is important that the WHOLE telescope is at a temperature close to the ambient temperature. BK-7 is a decent optical glass, also commonly used in the best optical systems. This is not a bad glass, as it is sometimes believed. What's more, from the point of view of the user of the Newton telescope, the optical characteristics of the glass are irrelevant - an important element is the figure of the mirror and the properly applied reflective layer. The physical characteristics of glass can be significant - the mirror itself is only a "bracket" for the

reflecting layer. In short: no, mirrors of GSO telescopes are not from Pyrex, they are made of BK-7 glass. BK-7 is not Pyrex. Pyrex is more expensive, but its use must be justified; in the case of a cooled telescope, there are no differences in the images obtained between Pyrex and BK-7. BaK-4 is quite expensive optical glass, with a high refractive index, used practically only in prisms (telescope, binoculars, angular connectors with Amici prism etc.), not very useful and rarely used in objective lenses and glasses. The presence of active cooling ("fan") in the back of the mirror shortens the mirror cooling time to 15 - 30 minutes, thus eliminating the difference between BK-7 and Pyrex.