

# teleskopy.pl



Astronomical observing has never been easier and affordable for everyone with the new Sky-Watcher Star Discovery line of telescopes! Star Discovery telescopes are intended for novice users lost in the multitude of various telescope models, looking for their dream equipment: " lighter than others " the fastest to fold " the easiest to use " more modern than others " first astronomical observations that are reliable in science This is what Star Discovery telescopes are like. Their stable, azimuth mounting on a steel, sliding tripod is concealed by the modern GO-TO SynScan system. Via a smartphone and the free SynScan application (Android / iPhone), it allows you to target and track over countless objects in the sky! Moreover, the system of dual axis encoders allows for manual repositioning of the telescope without the risk of losing orientation of the telescope with respect to the stars. The mounting head has a basket for 8 batteries / rechargeable batteries, thanks to which the telescope can operate wirelessly. This opens up great opportunities for observation away from buildings, for example during a car trip to the dark, starry sky outside the city. It is also an ideal proposition for the organizers of sky shows, popularizers of astronomy and teachers. Nothing stands in the way of going on a nighttime escapade with the new Star Discovery telescope. Express assembly / disassembly of the optical tube and the assembly of the tripod is done using single knobs and takes 3 minutes. Tripod tripod components, together with the tube, will fit into any car and is easy to carry and fold by 1 person The adjustable elevation axis clutch enables smooth and light steering of the telescope, even at zenith. Appropriate quality finder-scope or red-dot (depending on the model) allows you to instantly find out in which part of the sky the found object lies. Impress your friends with your knowledge of the sky by showing them off in the Star Discovery telescope! The assembly of Star Discovery telescopes is not only astronomical equipment. Just remove the telescope from it and mount a DSLR with lens to enter the world of simple astrophotography, time-lapse photography and videos. This mount offers the functionality of the Virtuoso mount - it allows you to trigger the shutter of digital cameras (through the appropriate cable available outside the set), it is battery powered and has a similar accessory mounting system on the L-adapter (dovetail). The Star Discovery series includes several types of optical instruments: " 102/500 mm achromatic refractor " Maksutov-Cassegrain 127/1500 mm " Newton parabolic reflector 130/650 mm " Newton parabolic reflector 150/750 mm Newton's optical system (mirror) Due to the high brightness, the telescope is especially recommended for observing nebulae objects. This model will also prove useful when observing planetary objects as well as the craters of the Moon. The main advantage of this telescope is a large 150 mm parabolic mirror, which is the most important element of the telescope, which determines what and how we can observe. This telescope collects about 320 times more light than the human eye at night, providing the ability to observe objects up to almost 12-13 stellar sizes (with the naked eye visibility up to 6 magnitudes). The size of the mirror is also related to the optical resolution, which in this telescope enables the separation of stars that are not less than 0.9 "apart from each other. Additionally, the telescope includes a Barlow lens, which in combination with an eyepiece with a diameter of 1.25 "will give us a double magnification increase, at the cost of the field of view and image brightness. It is worth supplementing the equipment of the telescope with additional glasses. One eyepiece with a shorter focal length, approx. 5-6 mm, for observing planets, and one eyepiece approx. 30-32 mm, with a large field of view, enabling the observation of the sky. Spectacle lift The telescope is equipped with an eyepiece extractor that enables the use of 1.25 "eyepieces. The set includes two aspherical eyepieces with a field of view of 62 °.

**Astrophotography** The Star Discovery 150 Newton telescope is the first telescope that can be successfully used in the science of astrophotography, thanks to a simple azimuthal assembly with a computerized drive in both axes, which has a load capacity sufficient to lift the tube f / 5 optical system by Newton and DSLR body. The extractor has a T-2 thread to connect the optional T-ring and the SLR body.

**Observation possibilities** The Solar System objects on the moon's surface with dimensions greater than 1-2 km; sunspots and their structure, visible photosphere granulation; all planets of the solar system; the phases of Mercury and Venus; Mars shield, polar caps in periods of opposition; several zones of Jupiter belts and Galilean moons; the rings of Saturn with a Cassini gap, a belt in the atmosphere and several smaller moons of the planet; Uranus and Neptune are visible as clearly blue stars; the movement of asteroids against the background of stars; observations of many fainter comets, visible structure of brighter comets star approximately 2.7 million stars across the sky, binary and multiple stars separated angularly more than 0.9 ", colors of many stars Nebulae objects all Messier directory objects; hundreds of globular clusters, in many cases partly broken up into individual stars; hundreds of open clusters with many visible differences in structure; several dozen nebulae, including first details, rich details of bright nebulae; dozens of galaxies with subtle details of the structures, shape and angular position of the disks; visible structure and structure of many planetary nebulae; visible remnants of supernovae Ground observations A telescope with this type of optics is not suitable for ground observation due to the inversion of the image.

**THE OFFERED TELESCOPIC ALLOWS YOU TO START OBSERVATIONS IN THE FIRST WEATHER NIGHT - INCLUDES ALL THE NECESSARY ACCESSORIES** Usage Moon the planet clusters mg<sup>3</sup>awice control from PC

**Technical parameters** " Optical system: Newton's mirror telescope " Objective diameter: 150 mm " Focal length of the lens: 750 mm " Lighted up: 1/5 " Theoretical stellar range: 13.6 magnitudes " Maximum useful magnification: 300x " Dimensions of the optical tube [cm]: 18 x 18 x 65 " Tripod: steel " Assembly: azimuth with GOTO, SynScan WiFi, smartphone controlled " Finder: 5x24 " Spectacle lift: 1.25 " " Weight: 4 kg net (6 kg gross) - tube with optics 8 kg net (10 kg gross) - tripod with GOTO head Kit components " telescope " folding steel tripod " Star Discovery GT head with WiFi " aspherical eyepiece 62 ° 1.25 "10 mm " aspherical eyepiece 62 ° 1.25 "23 mm " 5x24 hybrid optical and projection finder " table-strut Warranty 3-year warranty on mechanics, 2-year warranty on electronics (note: currently version with built-in WiFi, without SynScan AZ remote control) **READ : A SHORT GUIDE TO CLEANING THE OPTICS** >

**FREQUENTLY ASKED QUESTIONS** << Question : Will a beginner be able to assemble and operate this telescope? Answer: For each telescope we provide a comprehensive instruction in Polish, from which the user will learn how to assemble the telescope and how to use it during observation. Clients usually do not have any difficulties with assembling the telescope as long as they read the instructions carefully. A separate issue is the search for objects in the sky during the first observations. That is why we recommend educational items from the Publications section

(especially maps and astronomical guides) and Stellarium: an excellent, free "planetarium" program in Polish, ideal for studying the sky and planning observations. ENTER AND DOWNLOAD THE STELLARIUM PROGRAM FOR FREE

Question : Can a DSLR be attached to this telescope? What accessories do I need for this? Answer: Of course YES, you can connect a digital SLR to this, as well as to any other telescope. To do this, you need: a projection adapter and a T2 ring appropriate to your SLR (there are 5 standards of SLR bayonets: Canon EOS, Nikon, Olympus E, Petax K and Sony Alfa / Minolta AF). These connectors are available in our online store in the astronomy accessories section.

Question : Can a compact camera be attached to this telescope? What accessories do I need for this? Answer: Of course you can. A suitable shelf for compact cameras can be found in the astronomical accessories section of our online store ( universal adapter for compact digital cameras ).

Question : Can a HYBRID type camera (a large compact camera with SLR dimensions) be attached to this telescope? What accessories do I need for this? Answer: You may try to do this, but it is not recommended. The so-called hybrids do not work well in astrophotography, because they do not have the ability to take the lens off the lens like an SLR, they have large dimensions and large lenses, which means that the shelf systems cannot be used , while the vignetting is high, as you cannot bring the lens very close to the last optical surface of the telescope's eyepiece. We recommend buying a SLR or a cheap compact.

Question : What else is worth buying for this telescope? Answer: The presented telescope is a complete set ready to conduct astronomical observations on the first clear night. As an addition, we recommend educational publications first, which will make both the use of the telescope and the observations themselves more conscious and easier. In addition, you should consider purchasing contrast planetary filters and solar filter foil (available from the Astronomical Accessories section).

Question : Can this telescope be used as a viewing telescope / nature spotting scope? Answer: NO. This mirror telescope (Newtonian) is not suitable for observing terrestrial objects as it produces an upside down image ("green down") and there are no optically good ways to "restore" it. However, this does not interfere with astronomical observations, because for the terrestrial observer the concept of top and bottom makes sense on Earth, it does not exist in space. On the other hand, Newton's telescopes are quite good for taking photos of ground objects and observing airplanes at cruising altitudes.

Question : Can I observe both planets and nebulae with this telescope? Is it a telescope only for the city or just for the countryside? Answer: All offered telescopes allow observation of the planets of the Solar System (all) and nebulae, ie more precisely galaxies, star clusters, emission nebulae, etc. A separate issue is the clarity of the details of the planets' surfaces and the number and brightness of nebulae objects. The smaller telescope has its sky, the big one - its own, but we can always count on wonderful observations of the surface structures of the Moon, the phases of Mercury and Venus, the Martian disc, Jupiter belts and the Galilean four moons of Jupiter, the ring of Saturn and the shields of Uranus and Neptune. The brightest nebulae, such as the Great Andromeda Nebula M31, the Great Orion Nebula M42 or the globular cluster in Hercules M13 always delight, even a small telescope will show several dozen of the most beautiful nebulae. Finally, the telescope, equipped with a sun filter, can be used to observe spots on the Sun's disc. There is no division between city and country telescopes , there are rather recommendations: if the telescope is to be used mainly in the city, in conditions of urban light pollution and high atmospheric instability (buildings give warm at night, warming the air and the image begins to "float" over a hot road on hot days!), then an achromatic refractor (lens telescope) or Maksutov (meniscus mirror) is recommended. Our target will be mainly planets and compact objects. On the other hand, under the tarnish black, rural sky, it is worth using a Newton system telescope (mirror) with the largest possible mirror that we can afford, because we can count on a more stable and more transparent atmosphere and a large The possibility of nebula observations.

Question : Does this telescope come with a tripod / mount? Answer: Of course YES, every telescope has a mount, unless it is described as an OTA ( Optical Tube Assembly ).

Question : You write that the telescope comes with an assembly, does it mean that you come and assemble the telescope for me? Answer: Mounting does not mean mounting , but a telescope tube mounting system. It must be understood that we never conduct observations "by hand" with an astronomical telescope - we must mount the telescope on a system that allows it to be precisely positioned in any part of the sky. In the case of azimuthal assembly , the tube is moved in two axes - azimuth ("left - right") and height ("up - down"). Please don't worry - it's nothing difficult, although the names may seem exotic at first. In addition, the assembly is equipped with stepper motors to move the telescope and the GOTO object search system, which greatly simplifies work under a starry sky on the first night.