

# teleskopy.pl



The Fujinon MT series binoculars are designed for demanding users. The binoculars of this series are equipped with phase coated prisms and BaK4 glass lenses coated with MC layers according to the technology using the EBC electron beam ( Electron Beam Coating ). This technology ensures that as much as 99.9% of incident light passes through a single air-to-glass interface and the light transmission of the entire system is at least 95%. At the center of the visible range, the efficiency of the entire instrument reaches up to 98%. This parameter provides bright, sharp and full of contrast images decisive for the special suitability of MT binoculars in night conditions, providing the binoculars of this series undisputed leadership in the group of night binoculars. MT binoculars meet military requirements according to US Navy naval standards. Water-resistant, nitrogen-filled optical system, resistance to saltwater and a structure made of resistant and light aluminum alloy guarantee their durability and reliability for many years of intensive use. No need to adjust the focus makes them a binoculars not fit for users, for whom this feature is particularly important (military, border guards). This feature provides clear images ranging from a minimum distance of good vision to infinity without the need to adjust the focus. A wide range of dioptic correction in spectacles allows individual adjustment of their optical system to eye defects. Technical parameters

- â€¢ Lens diameter: 50 mm
- â€¢ Zoom: 7x
- â€¢ Output: 7.1 mm
- â€¢ Construction of prisms: porropryzmatyczna
- â€¢ Material of glass elements: optical glass BaK-4
- â€¢ Anti-reflective layers: EBC ( Electro Beam Coating ), blue, total system efficiency 95%
- â€¢ Field of view: 7.5 ° / 131 m / 1000 m
- â€¢ Eye relief : 23 mm
- â€¢ Relative brightness: 49
- â€¢ Twilight efficiency: 18.7
- â€¢ Adjusting the focus: individually for each eyepiece, +/- 5D
- â€¢ Minimum distance of observation: 7 m (large depth from about 20 meters)
- â€¢ Range of eyepieces / output gauges: 56 mm - 74 mm
- â€¢ Water resistance: YES
- â€¢ Nitrogen filling: YES
- â€¢ The option of connecting a tripod: YES
- â€¢ Dimensions: 218 x 196 mm
- â€¢ Weight: 1230 g (1630 g complete with strap and case)
- Warranty 30 years
- Marks of Fujinon binoculars
- â€¢ C - equipped with a built-in compass
- â€¢ CF - "central focusing" - central sharpening
- â€¢ ED - binocular optics made of extra low dispersion (Extra low Dispersion) glass, thanks to which a very good correction of chromatic aberration is obtained
- â€¢ F - like Fujinon and Flat Field - the highest quality selected optical elements for

perfect mapping - contrast, sharpness and large field of view

â€¢ M - "military" - meets the requirements of strength and durability for military binoculars

â€¢ MT - "marine tested" - tested for navy (meets US Navy standards, including the impact of salt water)

â€¢ r - "reticle" - built-in rangefinder

â€¢ R - "rubber coated" - rubber casing

â€¢ SX - computer-designed lenses and BaK4 prisms are covered with MC layers in the patented ECB technique (Electron Beam Coating), thanks to which for a single medium boundary the transmission reaches 99.9% of the beam intensity of the incident light; thanks to the transmission of the entire binoculars even up to 95%

â€¢ WP - "waterproof" - waterproof binoculars (up to 2 meters deep)

>> FREQUENTLY ASKED QUESTIONS <<

Question : I find FMTR-SX- 2 and FMTR-SX on the Internet. What is the difference between these two models? Is the model you offer without "2" some older / worse type? Answer: A few years ago, the European distributor Fujinon introduced the SX-2 designation for binoculars with a slightly changed, improved design. However, this was only temporary, when there were two versions of the binoculars on sale. Today, all the binoculars offered on the primary market (ie new) are just this new design. That is why we do not distinguish between SX and SX-2, because the manufacturer himself does not introduce such a distinction. There are still such "relics" on the Polish Internet, but you should not pay attention to them.

Question : What do the numbers 10x25 / 10x50 / 7x50 / 20x60 / 20x80 /

â€¢â€¢8-20x50 / 10-30x50 given with the name of the binoculars? Answer: The first number in the record 7x50 means the angular magnification (sevenfold), and the second - the diameter of the lenses expressed in millimeters. A record like 8-20x50 or 10-30x50 means that we're dealing with zoom-binoculars, which is equipped with a smooth change of magnification system, from 8 to 20 times or 10 to 30 times. 50 means, of course, the lens diameter.

Question : Is there a case and a strap to hang binoculars around your neck? Answer: Yes, each binoculars has a carrying case and a neck strap, usually also caps for lenses and glasses, unless it is clearly written that it does not have one.

Question : What effect does the magnification and the diameter of the lenses have on the image of the binoculars? Answer: The greater the magnification, the greater the perceptibility of details, but also the smaller the surface brightness of the objects. Therefore, if you are looking for hunting binoculars, the magnification should be between 7 and 10x, for birds and landscapes we recommend binoculars with a magnification of between 7 and 12x, while for observing aircraft you usually choose binoculars with large magnifications, on the order of 15-20x or zoom binoculars . In turn, the larger the lens diameter, the higher the resolution of the binoculars and the brighter the image, but also the greater weight and size of the binoculars, sometimes requiring a photographic tripod.

Question : I still do not know what binoculars to decide, I want to buy a universal pair of binoculars with good parameters to "see a lot". How to choose? Answer: The most universal parameters of the binoculars are 10x50 and we recommend them - they are characterized by good visibility and, at the same time, brightness, a large field of view and do not require a tripod.

Question : Is it better to choose binoculars with constant magnification or binoculars with zoom? Answer: Zoom binoculars are equipped with an additional optical system that allows you to change the magnification. In optics often "less is more". Each additional optical system, which is not the corrector of one of the optical defects, always has a negative effect on the image quality. It's like with photographic lenses - the most valued ones are fixed, not those with variable focal length. On the other hand, binoculars with zoom are more versatile, because nobody wears 2-3 binoculars with different magnifications.

Question : Does this binocular have glass lenses or plastic lenses? Answer: All conventional binoculars have the whole glass optics, since only glass can be polished and polished to the right shape, while polymers ("plastics") have the accuracy of limited form accuracy.

Question : You write in the specification about antireflection / anti-reflective layers, what is it? Are the anti-reflective layers so that I can not see, that is, the binoculars do not give "reflections", eg from the Sun? Answer: Anti-reflective layers, also called anti-reflective layers, serve to increase the efficiency of the optical system, for example, binoculars, but basically any other device. Optical efficiency defines how many percent of the beam entering the optical system goes through the system. It is necessary to know that when light falls on the border of two optical centers, eg glass / air, a certain fraction of the beam is reflected. From everyday experience, we know that you can look through the window - just for that reason. In order to minimize losses, anti-reflective layers are used, thanks to which more light passes through the boundaries of the centers, and less reflects. Antireflective layers can be of various types and types, often they are the price of the best binoculars, whose total efficiency can reach up to 95%. It is worth knowing that anti-reflective layers are applied to optical surfaces of microscope elements, telescopes, observation telescopes, sights, photographic lenses and night vision devices for the same purpose as for binoculars.

Question : When describing binoculars, you write about glass of prisms, BK7 and BaK-4, what's the point? Answer: Most optical prisms are made of glass BK-7 (borosilicate) or BaK-4 (bar cron). BAK-4 is a glass of higher quality and gives brighter and sharper images. It is also more expensive glass, usually used in high-end binoculars. It is worth paying attention to, especially if you are looking for binoculars for hunting and astronomical applications.

Question : In the description I did not find some parameters of binoculars, which I found on other websites. Can I find out what binoculars have brightness and twilight efficiency? Answer: For the sake of clarity, we usually do not provide secondary parameters that do not provide additional information than those provided. Nevertheless, these parameters can be calculated independently:

â€¢ exit pupil is the area in the eyepiece in which the image is created; The diameter of the exit pupil is equal to the ratio of the lens diameter by magnification, eg for 7x50 binoculars it is  $50/7 = 7\text{mm}$ , for 10x50 binoculars:  $50/10 = 5\text{mm}$ , and for 20x60 binoculars:  $60/20 = 3\text{mm}$ ; this parameter is usually given in the description

â€¢ relative brightness is the square of the exit pupil (exit vista: see above); for 10x50 binoculars, the output is 5, that is, the brightness is 25, similarly for binoculars 7x50, the brightness is 50, for binoculars 20x60, the brightness is 9, etc.

â€¢ twilight factor is another secondary parameter that nocturnal people like to pay attention to; it is equal to the square root of the product of the magnification and the diameter of the lenses; with a simple calculator, we can quickly calculate this parameter: - for 8x40 binoculars: 17.9 - for 7x50 binoculars: 18.7 - for 10x50 binoculars: 22.4 - for 20x60 binoculars: 24.5

Question : I am looking for binoculars for astronomy, which one to choose? Answer: You can not give a simple and short answer to this question. Astronomical binoculars are simply very good binoculars. This means very good correction of optical defects (mainly chromatic aberration and distortion at the edges) and high optical efficiency. For these reasons, we do not recommend binoculars with zoom for astronomy, except maybe a few exceptions. Astronomical binoculars do not have to have a large magnification - from this there is a telescope to observe at high magnifications. The binoculars usually should be handy so that they can always be taken with us when we can not

take a telescope with us - then we choose binoculars 7x50, 10x50 or 15x70. Usually, because large binoculars dedicated to astronomy type 20x80, 22x100 are a separate class of optical instruments requiring observation from a tripod. For the beginning observer, astronomical binoculars are used to explore the sky, the colors of the stars, and search for the deepest objects of the deep sky. For an advanced observer, a large pair of binoculars is a very efficient device for observing comets, variable stars, nebulae, star clusters, galaxies. Question : I am looking for lornetki na jacht / kajaku / na ryb / na morze, which one to choose? Answer: The binoculars for water must be waterproof, filled with nitrogen and should have a 7-fold magnification, since only this magnification guarantees a clear and stable image. Question : I am looking for binoculars for bird watching, should I purchase high magnification binoculars (16x, 20x or binoculars with zoom)? Answer: For observation of birds, we usually recommend binoculars with a small or medium fixed magnification, i.e. from 7 to 12 times. The optimal set for a bird watcher is a fixed-magnification binocular and an observation telescope with a zoom on a photographic stand.