

SharpStar 20032PNT 200mm superfast f/3.2 Newtonian reflector

The SharpStar 20032PNT 200mm superfast f/3.2 Newtonian is an easy-to-assemble telescope that combines stylish design with detailed results.



By [Gary Palmer](#)

SharpStar is a relatively new brand in the UK, but it has been growing in popularity around the world. This is down to its equipment looking good and its reputation for high quality construction, so we were quite eager to review its 20032PNT 200mm super-fast f/3.2 Newtonian reflector.

There is a lot to take in on the specifications sheet and when we opened the included flight case we were far from disappointed with the telescope's looks.

Inside we found a carbon fibre tube equipped with anodised aluminium tube rings, Losmandy plate, carry handle and matching dust cover, along with a 3-inch focuser and a 1.25-inch adaptor.

On the base plate is a fan with a switch and a slot to fit the included hygrometer that is used to measure dew point and temperature.

The switch marked 'heater' is not connected to anything but is ready if you want to install a heater on the scope yourself.

Opening the dust cover reveals a well-finished inside, with a solid thin spider vane holding the secondary mirror in place.

One thing that can put some users off using a fast Newtonian telescope is the collimation, but once mounted this was easily achieved with the chunky collimation bolts; the short length of the tube made them easier to reach.

While the scope is really for imaging, we started off the review with a look through an eyepiece and got some pleasant views of different objects in the sky.

Moving on to test the scope's primary purpose, its imaging capabilities, we then removed its eyepiece holder to set up a camera.

Having a built-in coma corrector, the back focus must be set for it to work correctly. Depending on the size of camera attachments there are two adaptor sizes for the back focus: an M54x0.75 thread giving 55mm of back focus, and the more common M48x0.75 thread adaptor that gives 52mm.

However, your equipment may need different adaptors to get the correct spacing.



Normally, reviewing a product is quite straightforward, however this review was frustrated from an imaging standpoint with stormy weather rolling in for weeks and any clear nights filled with snow showers.

On the plus side this telescope is very fast, which meant we could reduce the imaging times on objects and grab any small gaps in the cloud that appeared.

Our first target for imaging was well placed with very bright stars – the constellation of Orion. It's a helpful target as it shows any off-axis light that is scattered inside the telescope, and that then appears in the images.

With a short capture run of 30×30 seconds it was nice to see no reflections in the images. Due to a bright Moon, we had to wait a few weeks for a suitable night to continue our tests.

We changed the camera for one with a wider field of view and chose the Whirlpool Galaxy, M51, and Leo Triplet as our next targets.

Having dodged the high clouds that were moving past, we found the resulting images showed how capable this telescope is. We even caught a quick image of the Moon through a cloud break.

Once the processing on the images was complete it was rewarding to see the amount of detail that had been captured, considering the weather and the short exposures used.

The image of the Whirlpool Galaxy had nice structural detail and a few smaller galaxies could be seen close by.

Again, with the Leo Triplet – where quite a lot of high cloud moved through – we were able to capture a presentable image, despite it only consisting of a set of 30×30 second exposures.

By far the nicest image was Orion, with the SharpStar capturing nice colour and good detail in the final image.

The SharpStar 20032PNT is a pleasant telescope to use and no one could be disappointed with the build quality or its imaging quality. There is only one small thing that would be nice to see included and that is a finderscope.



Outstanding optics

Much thought has been put into the optical system on the 20032PNT, using a 200mm, f/3.8 paraboloid primary mirror and a short-axis 90mm plane secondary mirror.

The primary mirror is made of PZ33 which is very similar to Pyrex, then primary and secondary mirrors are coated in a reinforced aluminium coating which helps to give high reflectivity.

This all leads to a very fast f/3.2 system that holds collimation very well during temperature changes or general moving around.

Included with the telescope is an air-spaced quartette coma corrector/reducer that is screwed into the focuser.

The reducing side is 0.8x, taking the focal length of the scope from 760mm to 640mm and making full-frame photography achievable and with excellent perimeter dimming control there is minimal vignetting.

To collimate the telescope, the top of the focuser is unscrewed and the coma corrector has to be removed.

There is an eyepiece holder included that can then be attached, allowing a collimating device to be inserted that makes the collimation process simple.



Spider vane

The spider vane that holds the secondary mirror in place is constructed from one piece of aluminium, making the mirror's position firm. With the scope working at $f/3.2$ it's essential to have good collimation. The spider vane helps maintain collimation when the scope is being moved between locations.

Focuser

A 3-inch dual-speed rack and pinion focuser with 10:1 fine focus is fitted to the telescope. It has two lock screws to keep a good focus on targets over the duration of imaging. It can also rotate to help frame any targets. We have to admit it's a very nice focuser to use, being very smooth and precise.

Tube rings, Losmandy plate, carry handle

The tube rings, Losmandy-style plate and carry handle give the telescope a striking colour. These are all anodised in red to match the cover and are moulded with holes in to keep weight to a minimum. The carry handle has a slot to allow the mounting of other accessories.

Fan

Built into the bottom of the telescope is a fan with a switch to turn it on. It's powered by a 12V power source. Running the fan for a while before an imaging session will help stabilise the air currents inside the scope. There is also a hygrometer included to monitor dew point and temperature.

Sturdy carrying case

A full-sized flight case is included to keep everything safe when you are storing or travelling with the telescope. There is plenty of room inside so the scope can go straight in the case without removing any of the included accessories. It's also lined with a soft-feel foam.

Vital stats

Optics Paraboloid Newtonian reflector

Aperture 200mm

Focal length 760mm f/3.8 (640mm, f/3.2 with the built-in reducing coma corrector)

Focuser 3-inch rack & pinion precision focuser

Extras Tube rings, Losmandy plate, carry handle and flight case

Weight 9.46kg

Length 633cm

This review originally appeared in the May 2020 issue of BBC Sky at Night Magazine.