

Tamron 90mm F/2.8 Di III Macro VXD 1:1 Lens

by Phil Rudin

Tamron, a Japanese company, first began developing precision optical equipment over seventy years ago. In 1953 they began sales of Wide Vision Binoculars and later moved to manufacturing lenses for SLR cameras.

Today they make a verity of lenses for DSLR's, Mirrorless cameras, Camcorder lenses, Surveillance camera lenses, Camera modules, Automotive camera lenses and more. Anyone who has been around the camera market is aware of the excellent reputation Tamron has had for years in the camera lens industry.

Tamron announced the SP 90mm F/2.5 macro lens in 1979 and over the last 45 year of evolution Tamron has continually refined the 90mm macro.

In September 2024 Tamron announced the 90mm F/2.8 Di III Macro VXD lens for mirrorless cameras. This lens is the eleventh in the 90mm macro evolution and the first macro for mirrorless cameras.

Tamron 90mm F/2.8 Di III Macro VXD 1:1 Lens

The Tamron 90mm F/2.8 Di III VXD is a versatile macro lens for underwater photography and excellent value at the retail price of \$699.00 US (£599UK) for both the Nikon Z and Sony E mount camera systems.

The 90mm angle of coverage is 27.2 degrees with a minimum focus distance of 23,1cm (9.1") at the maximum reproduction ratio of 1:1 (life size). By comparison the \$1099.00 Sony 90mm F/2.8 has a 27 degree coverage and a minimum focus distance of 28cm (11.02") at the 1:1 reproduction ratio.

The Di III branding is used for all Tamron mirrorless lenses and the VXD indicates that the lens has the Voice-coil eXtreme-torque Drive Linear autofocus motor. Tamron's internal focus VXD autofocus system is noticeably faster than the older Direct Drive SSM system used in the Sony 90mm macro for both stills and video.

In use I did not detect much if



Hermit Crab, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, ISO-100, F/16, 1/250th sec



Lined Seahorse, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, ISO-100, F/11, 1/250th sec

any difference in the minimum focus distance between the Sony 90mm and the Tamron 90mm.

The Tamron 90mm macro has 15 elements in twelve groups including four LD elements to greatly reduce color fringing, improved clarity, color accuracy and reduce chromatic aberration. Individual elements also have BBAR-G2 Broad-Band Anti-Reflective coating to reduce ghosting, flare, and improve color fidelity when working in strong lighting conditions like shooting upward angles underwater.

The lens has twelve circular aperture blades which will deliver superb bokeh with nearly a perfect circular aperture opening, when wide open.

When setting the focus limiter switch on most macro lenses the normal focus range is from 1:1 (life size) to 0.5 meters. The Tamron 90mm macro has the upside of having a focus limiter setting that goes from the Minimum Focus Distance of 1:1 to 0.7 meters. This is a maximum distance of 70cm (27.56 inches) verses 50cm (19.69 inches) for other macro lenses



Conch Eye Detail, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, Marelux +5 C/U lens, ISO-100, F/16, 1/250th sec

focus limiting switch.

Limiting the focus range helps reduce the amount of hunting necessary to lock subject focus when the lens is searching the entire 1:1 to infinity range. Most macro lenses only give you the 1:1 to 0.5 meter or 1:1 to infinity settings to choose from. I can't stress enough what an upside the additional 20cm (1:1 to 27.5 inches 70cm) is for closeup to super macro compared to the hunting that occurs between 1:1 and infinity.

This lens is also weather sealed and has the same 67mm filter

thread used on many Tamron lenses allowing filters and polarizers to be interchanged. The lens has no built-in image stabilization and relies on the cameras IBIS system. I use IBIS on all of my cameras and have not found the lack of lens stabilization to be an issue with any macro lenses.

The lens has a maximum aperture setting of F/16, for some this will be an issue but I did not find it to be a deal breaker.

Field testing the Tamron 90mm F/2.8 Macro

During this review I used the Tamron 90mm F/2.8 macro lens with the Sony A7R V camera, Marelux MX-A7RV housing with 45 degree viewfinder, Marelux flat macro port 32 and 60mm's of extension (40+20). For lighting I used two Marelux Apollo S strobes triggered with a UWTechnics flash trigger and four Marelux six inch arms for support.

I also used Marelux +5,+10 and +15 closeup lenses at times stacking two. I also used the Marelux LimiLink wireless flash trigger and at times fiber optic cords along with a verity of diffusers. I also used two Marelux 1500ml Flexibuys for buoyancy control. The Tamron 90mm macro is 4mm shorter than the Sony 90mm (126.5mm V 130.5mm) which should be considered when choosing a port configuration for other housing brands.

I shoot the A7R V camera in manual mode with the auto focus set to single-shot using drive mode AF-C and tracking expanded flexible spot (medium) focus area.

I manually adjust ISO, aperture and shutter speed on the fly as I have done for decades with a starting ISO of 100 for macro.

I love my 45 degree optical finder paired with the stunning 9.44m-dot



Spiny Lobster, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, ISO-100, F/14, 1/250th sec

EVF on the A7RV for macro. I only use the LCD for Blackwater and a few other situations where a 180 viewfinder would be a better choice like fast moving subjects.

I also keep the camera set to the

animal eye detect setting most of the time and find that it works on some subjects and does not affect AF speed for other subjects like nudibranchs. Animal eye detect also acquires human eyes with the same accuracy

and speed found with human eye detect.

With the Tamron 90mm macro and the camera's 5.5 stops IBIS system you can take shots with excellent focus down to about 1/15th sec.



Coral Polyp Detail, Blue Heron Bridge, Florida, USA. Sony A7R V, Tamron 90mm macro, Marelux MX-A7RV housing, two Apollo S Strobes, UWT flash trigger, ISO-100, F/16, 1/250th sec

or less with slow moving subjects.

With the UWT flash trigger I am able to shoot above the Sony A7R V maximum sync speed of 1/250th sec. and normally shoot in the 1/100th to 1/500th second range. At times I have gone as high as 1/1600th just for testing and it is also nice to be able to drag

the shutter from time to time and know you will be getting good results.

I try to keep the ISO in the 100 to 400 range while shooting between F/9 and F/16. Everything in photography is a tradeoff and I find the many excellent features of the Tamron 90 macro outweigh the loss of F/stops above F/16.

I shoot exclusively with mechanical shutter which allows for higher shutter speeds. Mechanical shutter allows me to shoot the occasional five frames a second burst which is about as fast as you need for U/W photography. Both the lens and the Apollo S strobes easily keep up during the five frame bursts.

In the water the focus tracking locks on and easily sticks to the subject even while moving the focus point around in the image frame. The Tamron 90 macro has fast and accurate auto focus even while using closeup lenses in the +5 to +15 range.

While I am sure someone will make a manual focus gear available for the Tamron 90mm in the future I have not found a need for one with the newer Sony cameras from version IV onward.

If you read my Sigma Art 105mm F/2.8 macro review in the last issue of UWP #141 you may remember I use the same port configuration with 70mm of extension rather the 60mm I use for the Tamron 90mm. This makes packing both lenses much easier for travel with as I use the 20, 30 and 40mm extensions for several of my wide lenses as well.

The Tamron 90mm would be my goto lens for fish portraits, general closeup shots and subjects down to 1:1. The Sigma 105 macro, while very capable for fish portraits, will be my preference for macro in

the 1:4 to 4:1 range where you need more distance between the subject and lens especially while using additional magnification.

For those U/W photographers just buying into a Sony full frame system who are casual macro shooters or just looking for value I would at this point be hard pressed to recommend the Sony 90mm macro over the Tamron 90mm. Both are great lenses and the Sony has some advantages like stabilization and the extra F22 stop but for speed and IQ the Tamron is a cut above. At the \$699.00 price point the Tamron is also a much better value than the \$999.00 US (on sale) now dated Sony 90 macro.

Phil Rudin
Instagram

*The Author is the Senior Advisor
for the Marelux Management
Team*

www.marelux.co