User Manual of Product 1:

Sigma 745306 150-600mm F/5-6.3 DG HSM Contemporary Zoom Lens for Nikon

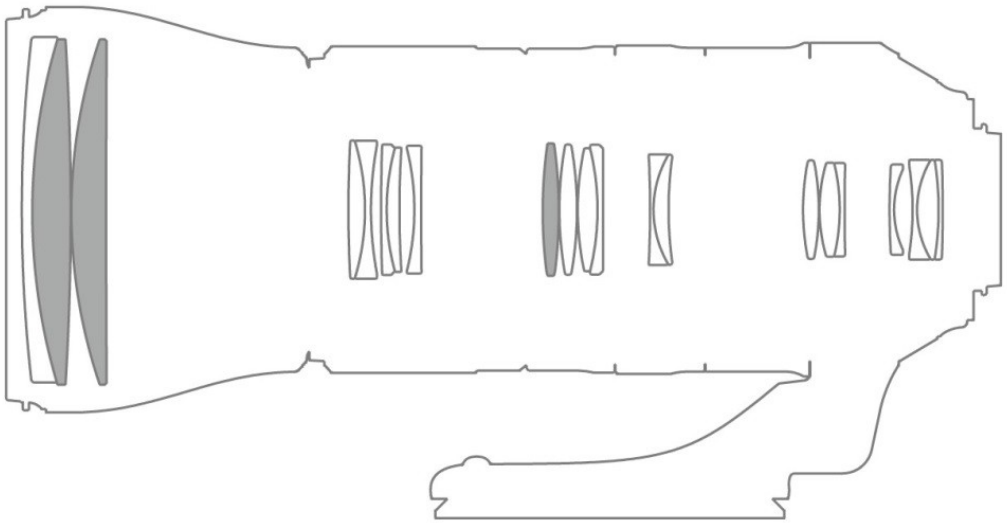
SP 150-600mm F/5-6.3 Di VC USD G2

(Model A022)

Additional Improvement on Optical Design

Upgraded optical construction

Three LD (Low Dispersion) lens elements completely eliminate axial and transverse chromatic aberrations. The design also features upgraded optical construction (21 elements in 13 groups) and leverages improvements in manufacturing technology. As a result, the lens delivers high resolution, improved sharpness and overall better performance.

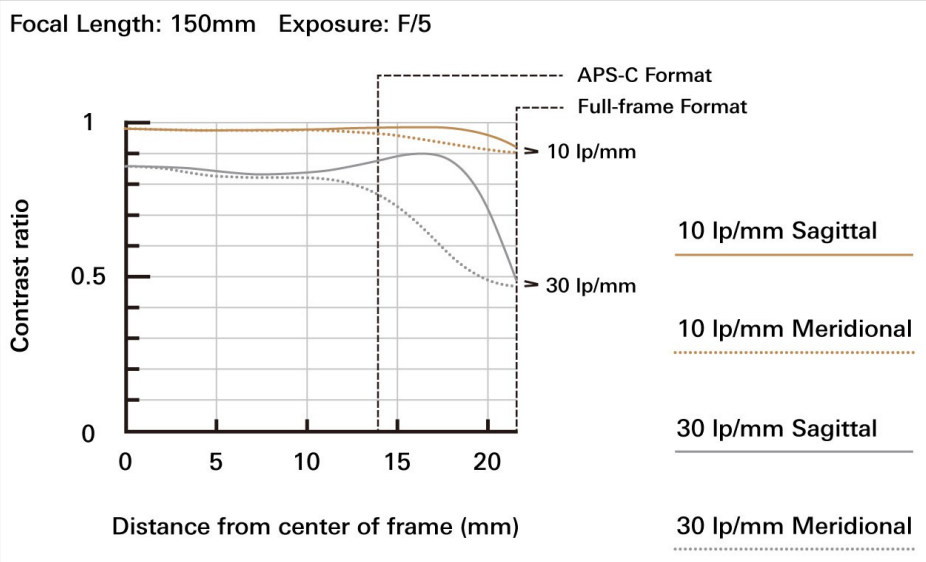


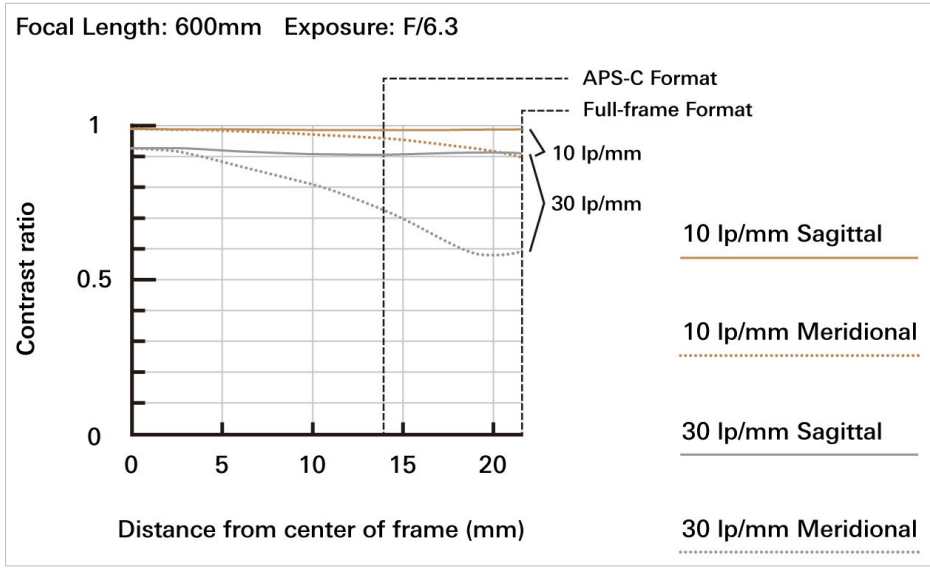
LD (Low Dispersion) lens element

Additional Improvement on Optical Design

TAMRON

High MTF Performance

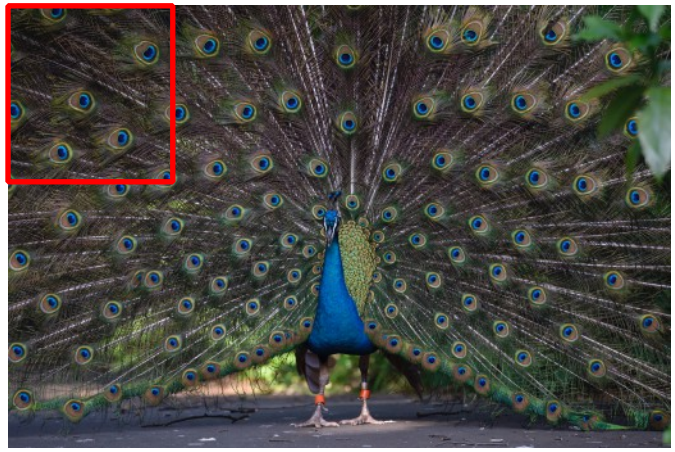




Additional Improvement on Optical Design

TAMRON

Better resolution on every single pixel



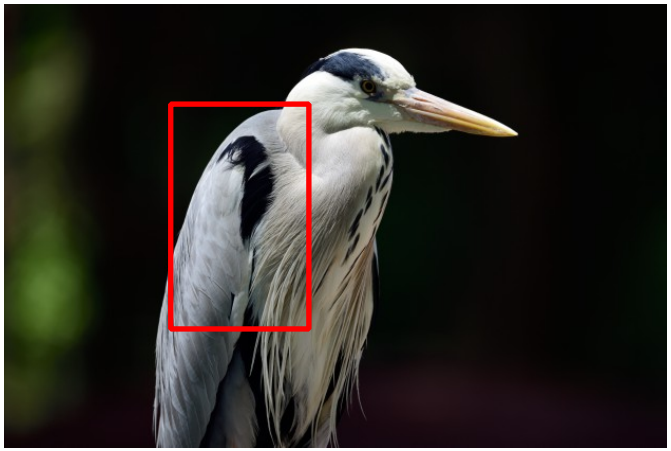
555mm F/7.1 1/320sec ISO 1600

Enlarged

Additional Improvement on Optical Design

TAMRON

Better resolution on every single pixel



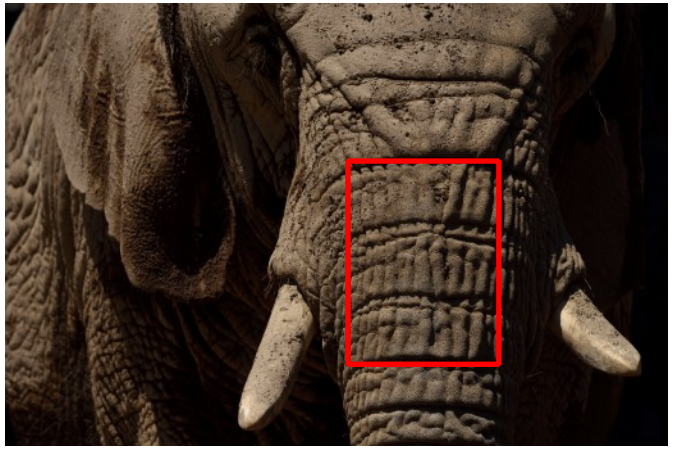
600mm F/6.3 1/640sec ISO 500

Enlarged

Additional Improvement on Optical Design

TAMRON

Excellent texture imaging



600mm F/9 1/640sec ISO 220

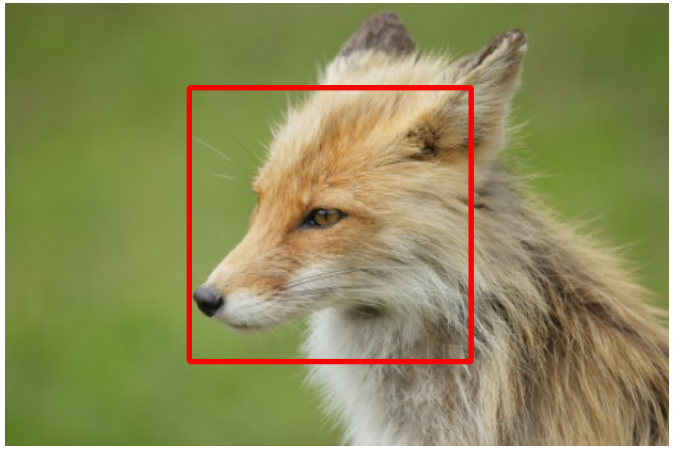
Enlarged

90mm F/11 ISO 100 1/5sec

Additional Improvement on Optical Design

TAMRON

Excellent texture imaging



600mm F/7.1 1/85sec ISO 200

Enlarged

90mm F/11 ISO 100 1/5sec

Additional Improvement on Optical Design

TAMRON

Great result of Bokeh of ultra-telephoto zoom

552mm F/7.1 1/250sec ISO 800

Additional Improvement on Optical Design

TAMRON

Great result of Bokeh of ultra-telephoto zoom

600mm F/6.3 1/400sec ISO 2000

Additional Improvement on Optical Design

Reduced MOD advantages tele-macro photography

Tamron’s advanced manufacturing technology has made it possible to reduce the MOD (Minimum Object Distance) to 2.2m (86.6 in), compared to 2.7m for Model A011, and has allowed for the wonders of tele-macro photography.

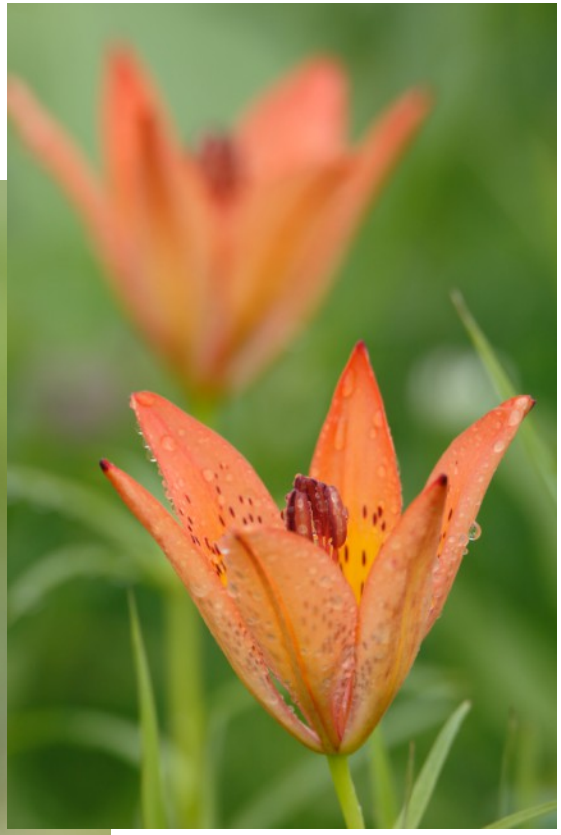
600mm F/6.3 1/2000sec ISO 800

Additional Improvement on Optical Design

TAMRON

Reduced MOD advantages tele-macro photography

600mm F/9 1/160sec ISO 1600



600mm F/8
1/160sec ISO 800

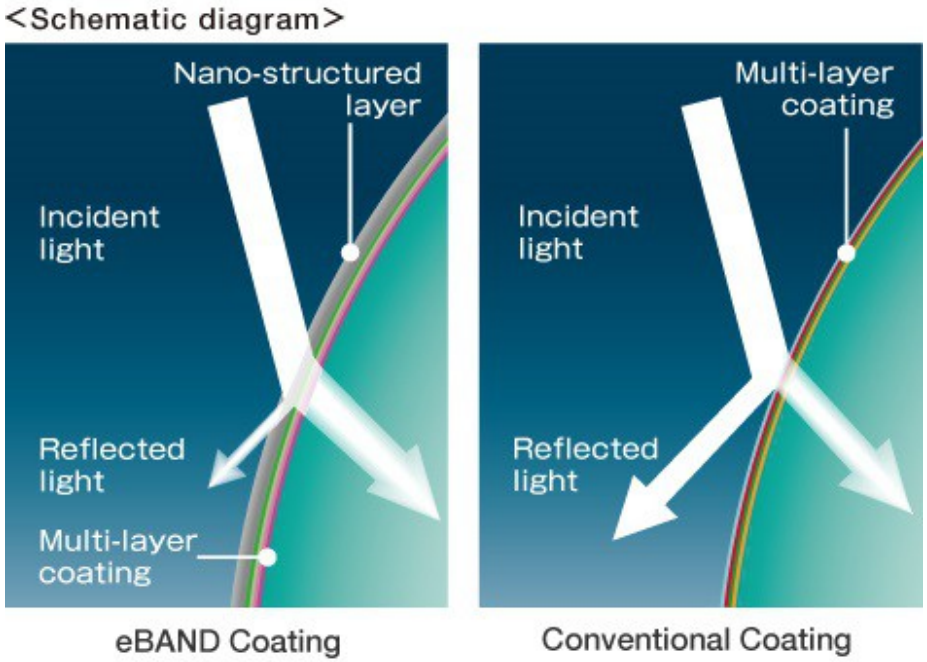
Additional Improvement on Optical Design

TAMRON

Reduce in an occurrence of flare and ghosting

eBAND (Extended Bandwidth & Angular-Dependency) Coating is a nano-structured layer deployed on the lens element surface. In addition to regular anti-reflection coatings, eBAND Coating offers higher light transmission and significant improvement in anti-reflection characteristics, especially against angulated incident rays.

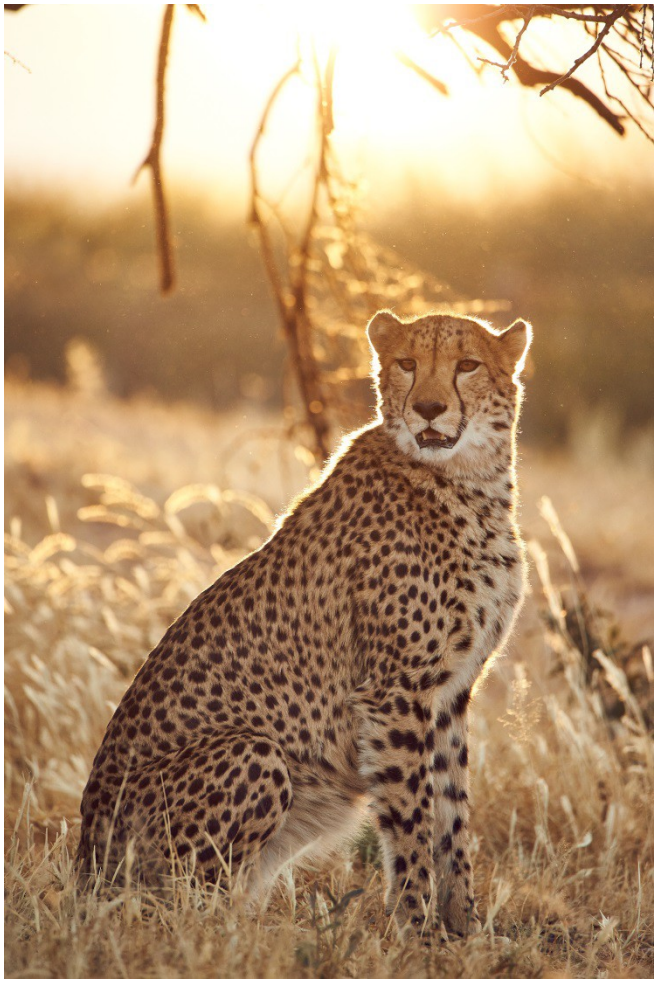
Combined with of BBAR (Broad-Band Anti-Reflection) coatings, flare and ghosting are reduced to imperceptible levels.



Additional Improvement on Optical Design

TAMRON

Reduce in an occurrence of flare and ghosting



600mm F/6.3 1/320sec ISO 1600

Additional Improvement on Optical Design

TAMRON

Reduce in an occurrence of flare and ghosting

460mm F/6.3 1/500sec ISO 360

Additional Improvement on Optical Design

TAMRON

Reduce in an occurrence of flare and ghosting

280mm F/7.1 1/640sec ISO 200

Improved Function

Faster AF and Better response

The Model A022 is equipped with a USD (Ultrasonic Silent Drive) ring-type motor that delivers excellent responsiveness and control. AF speed is significantly improved from current model, and it enables accurate high-speed focus even when capturing moving subjects.

When shooting with AF, the Full-time Manual Focus override allows you to instantly make fine focusing adjustments manually, without having to switch between modes.

Improved Function

Faster AF and Better response

350mm F/6.3 1/1600sec ISO 400

Improved Function

TAMRON

Faster AF and Better response

552mm F/6.3 1/2000sec ISO 200

Improved Function

TAMRON

Faster AF and Better response

600mm F/11 1/1250sec ISO 400

Improved Function

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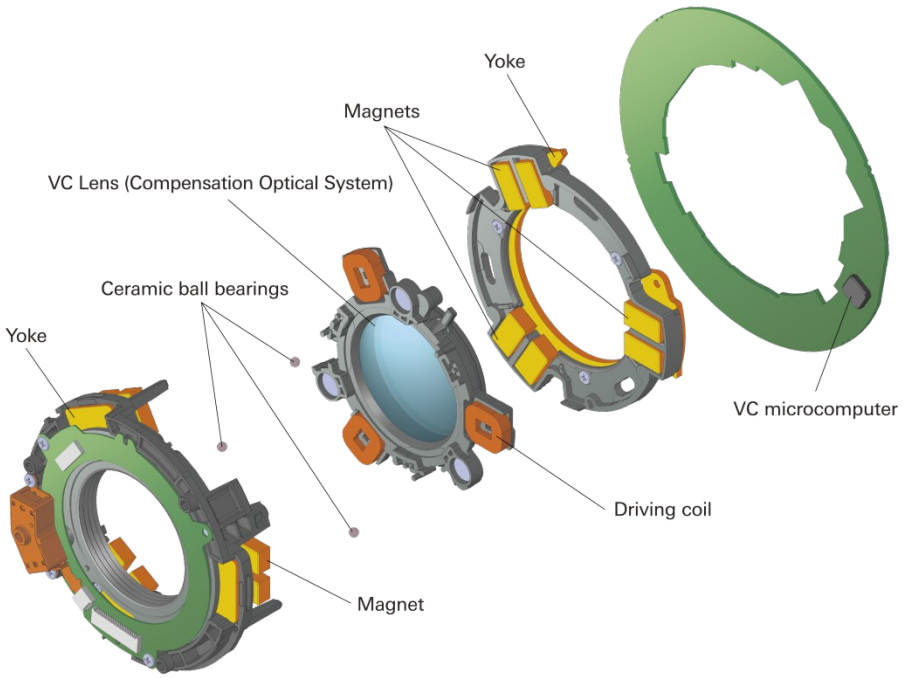
Improved VC performance (4.5 stops, 3 different modes)

The VC (Vibration Compensation) effectiveness is equivalent to 4.5 stops, based on image stabilization performance levels established by CIPA (Camera & Imaging Products Association) when using in VC MODE 3.



Improved Function

TAMRON

Improved VC performance (4.5 stops, 3 different modes)

Model A022 now has three types of VC modes, and it is possible to choose the optimum VC mode according to the situation for taking a photograph, such as when wishing to pan the camera.

- VC MODE 1 is the standard mode that strikes a great balance between the stability of the viewfinder image and the stabilization effects.
- VC MODE 2 is exclusively used for panning.
- VC MODE 3 prioritizes the stabilization of the captured images and forgoes the stabilization of the viewfinder image.

With the optional accessory TAMRON TAP-in ConsoleTM, you can custom the configuration of VC MODE 1. Choose the viewfinder view of either standard or viewfinder image priority.

Improved Function

Improved VC performance (4.5 stops, 3 different modes)

VC MODE 2 Panning shot

600mm F/11 1/1250sec ISO 400

Improved Usability

New FLEX ZOOM LOCK mechanism

FLEX ZOOM LOCK mechanism quickly locks or unlocks the zoom at any position simply by sliding the zoom ring. Photographers can shoot from any angle without the zoom extending unintentionally. Additionally, the conventional Zoom Lock switch prevents unwanted barrel extension during transportation.

UNLOCK

LOCK

Improved Usability

TAMRON

Moisture-Resistance Construction and Fluorine Coating

The front surface of the lens element is coated with a protective fluorine compound that is water- and oil-repellant. The lens surface is easier to wipe clean and is less vulnerable to the damaging effects of dirt, dust, moisture and fingerprints. For greater protection when shooting outdoors, leak-proof seals throughout the lens barrel help protect your equipment.

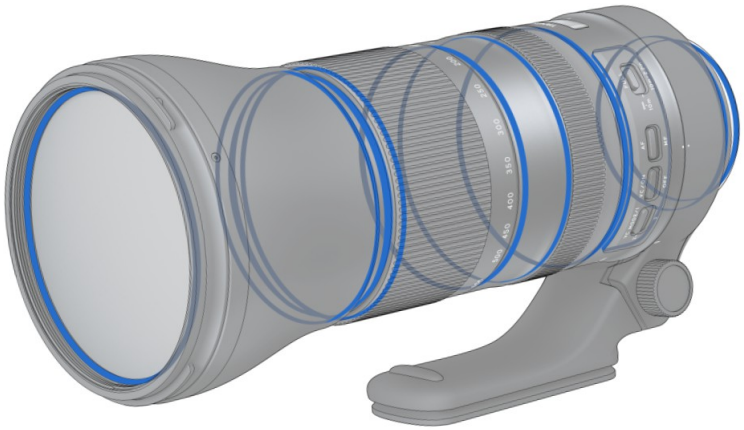


Image illustrates resistance to grime (oil-based felt marker)

Left side:
Without Fluorine Coating

Right side:
With Fluorine Coating

Improved Usability

Electromagnetic diaphragm system for Nikon-mount lenses

An electromagnetic diaphragm system, which has been a standard feature for Canon-mount lenses, is now employed in Nikon-mount lenses*. More precise diaphragm and aperture control is possible because the diaphragm blades are driven and controlled by a motor through electronic pulse signals.

* Available only with cameras compatible with the electromagnetic diaphragm (D3100, D3200, D3300, D5000, D5100, D5200, D5300, D5500, D7000, D7100, D7200, D300, D300s, D600, D610, D700, D750, D800, D800E, D810, D810A, D3x, D3s, D4, D4s, Df, D500, D5). (As of September 1; Tamron)

Improved Usability

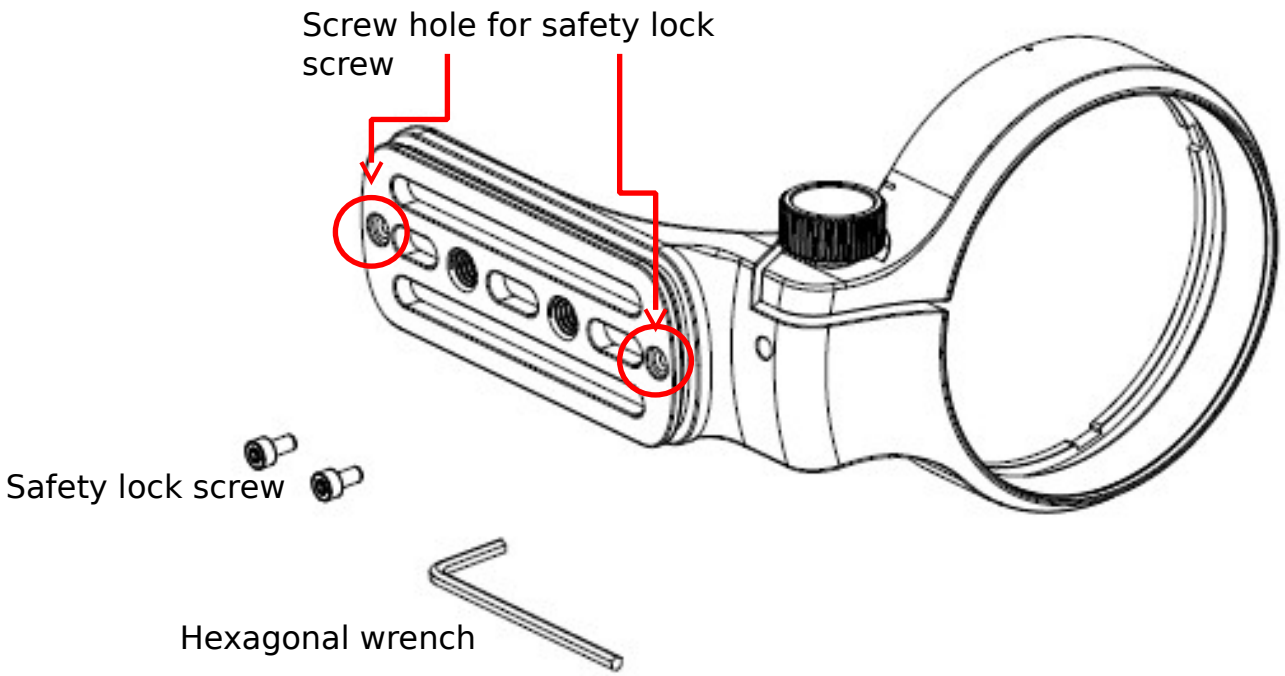
New Arca-Swiss style tripod

A new textured grip and Arca-Swiss style tripod interface enhances both speed and utility. And because the tripod mount is made of lightweight magnesium, it is both light and strong.

Improved Usability

New Arca-Swiss style tripod

Two safety lock screws and a hexagonal wrench are included with the SP 150-600mm. You can utilize screws depending on your tripod head type.

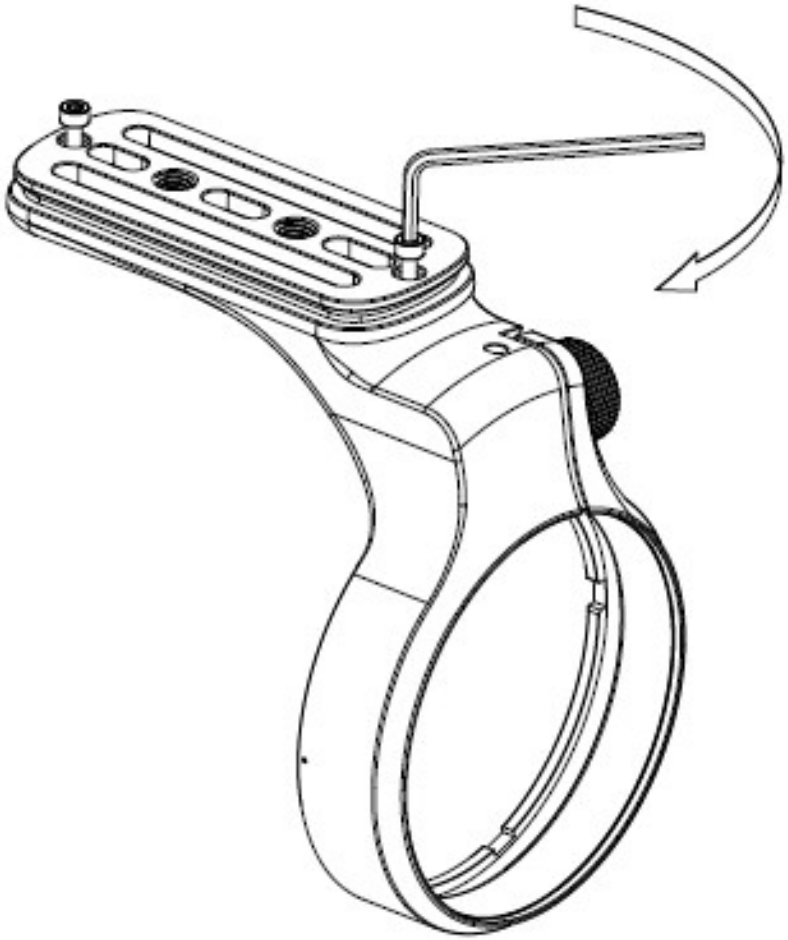


Improved Usability

New Arca-Swiss style tripod

Depending on the dimensions of your tripod head, the safety lock screws can be used to prevent the lens/camera from coming loose when the tripod mount is attached to an ARCA-SWISS camera platform or clamp.

If you are using a tripod or clamp that does NOT have an Arca-Swiss style mount, the safety lock screws should not be used because they protrude from bottom of the mount and could interfere with proper seating on a conventional tripod head or clamp.



Based on the rigorous quality standards worthy of the SP series, this new lens is manufactured with thorough attention to details

For the SP series products in particular, Tamron has established rigorous design and quality standards. These standards apply to the optical design, mechanical design and the cosmetic appearance, as well as to such wide-ranging areas as the product's robustness and improvements in various individual functions. Tamron thoroughly reviews of all of the design and manufacturing processes in order to offer products to customers with ever-higher precision and quality levels.

For the SP 150-600mm G2 (Model A022), the optical design was refreshed, mechanical parts were improved and a new exterior design was adopted. To maximize the optical performance intrinsic to this product, Tamron improved the accuracy of component parts and increasing the precision of the overall zooming mechanism.

With hood

Design Concept

The new design adopted for the four SP series lenses already on the market is essentially the fusion of engineering and style, the pursuit of functional beauty and craftsmanship achieved by giving meticulous attention to minute details. Using metal as the exterior material creates a high-grade design based on the concept that emphasizes “Human Touch” characteristics, and significantly improves user-friendliness. The SP models feature a novel design for the switches, easy-to-read characters, an enlarged window over the distance scale and the adoption of organic forms easy for the photographer’s fingers to hold onto.

This design philosophy—the pursuit of functional beauty with a “Human Touch”—is applied even to the most minute details of the new SP 150-600mm G2 (Model A022) ultra-telephoto zoom. By using metal for the exterior material and adding new functions such as the FLEX ZOOM LOCK mechanism, the Model A022 achieves a size and weight that makes comfortable handheld shooting possible, with a slim and stylish appearance design to top it all off.

The tele converters exclusively for the Tamron lens now developed

Two exclusive tele converters, which perfectly match the optics of the new SP 150-600mm G2 (Model A022), offer 1.4x and 2.0x magnification, and provide a maximum zoom range up to 1200mm. These new tele converters extend focal length of the master lens, making it possible to take pictures in farther ultra-telephoto ranges.

The tele converters exclusively for the Tamron lens now developed

TAMRON

Changes in zoom range when used with SP 150–600mm F/5–6.3 Di VC USD G2 (Model A022)

	Mounted on 35mm full-frame DSLR camera	Mounted on APS-C format DSLR camera
Without tele converter	150-600mm	Approx. 233-930mm
With 1.4x tele converter	210-840mm	Approx. 326-1302mm
With 2.0x tele converter	300-1200mm	Approx. 465-1860mm

Changes in magnification ratio when used with SP 150-600mm F/5-6.3 Di VC USD G2 (Model A022)

	Maximum Magnification Ratio
Without tele converter	1:3.9
With 1.4x tele converter	1:2.8
With 2.0x tele converter	1:2

Available focusing mode when used with SP 150-600mm F/5-6.3 Di VC USD G2 (Model A022)

	When using viewfinder	When using live view mode
With 1.4x tele converter	AF*1*2/MF	AF*2/MF
With 2.0x tele converter	MF	AF*2/MF

*1 Autofocus functions normally on any camera that offers F/8 autofocusing (see your camera's instruction manual for your camera's ability).
*2 Subjects with low contrast and/or luminosity values can sometimes result in out-of-focus images.

Compatible with TAMRON TAP-in ConsoleTM, an optional accessory product

The optional TAP-in Console provides a USB connection to your personal computer, enabling you to easily update your lens's firmware as well as customize features including fine adjustments to the AF and VC.

Comparison with other lenses

TAMRON

Manufacture / Model	Tamron A011	Tamron A022	SIGMA			Nikon
Prodiuct name	SP 150-600mm F/5-6.3 Di VC USD	SP 150-600mm F/5-6.3 Di VC USD	SIGMA 150-600mm F5-6.3 DG OS HSM | Sports	SIGMA 150-600mm F5-6.3 DG OS HSM | Contemporary	APO 50-500mm F4.5-6.3 DG OS HSM	AF-S NIKKOR 200-500mm f/5.6E ED VR
Focal length	150-600mm	150-600mm	150-600mm	150-600mm	50-500mm	200-500mm
35mm equivalent	232.5-930mm	232.5-930mm	225-900mm	225-900mm	75-750mm	300-750mm
F number	5-6.3	5-6.3	5-6.3	5-6.3	4.5-6.3	5.6
Angle of view	16°25′-4°8′	16°25′-4°8′	16.4°-4.1°	16.4°-4.1°	46.8°-5°	12.2°- 5.0°
Optical construction	13-20	13-21	16-24	14-20	16-22	12-19
Glass element	LD 3	LD 3	FLD 2 SLD 3	FLD 1 SLD 3	SLD 4	ED 3
Special coating	eBAND	eBAND/ fluorine coating	SMC	SMC	SMC	-
MOD	2.7m	2.2m	2.6m	2.8m	0.5-1.8m	2.2m
Max. magnification ratio	0.2x	0.256x	1： 5	1： 4.9	1： 3.1(200mm)	0.22x
Aperture blades	9 (circular diaphragm ）	9 (circular diaphragm ） E/N electromagnetic throttle	9 (circular diaphragm ）	9 (circular diaphragm ）	9 (circular diaphragm ）	9 (circular diaphragm ） Electromagnetic throttle
Filter size	φ95mm	φ95mm	Ø105mm	Ø95mm	Ø95mm	φ95mm
Maximum diameter	φ105.6mm	φ108.4mm	Ø121mm	Ø105mm	Ø104.4mm	φ108mm
Length	257.8mm	257.7mm	290.2mm	260.1mm	219mm	267.5mm
Weight	1,951g	1,980g	2,860g	1,930g	1,970g	2,300g
Focus method	IF	IF	RF	IF	RF	IF
Image stabilization	VC	VC(4.5 stops) when using in Mode 3	OS	OS	OS	VR （ 4.5 stops ） image stabilization mode for tripod
AF drive	USD	USD	HSM	HSM	HSM	SWM
Compatible mounts	N/C/S	N/C/S	N/C/Σ	N/C/S/Σ	N/C/S/P/Σ	N
Hood	Round-shaped	Round-shaped	Round-shaped	Round-shaped	Flower-shaped	Round-shaped
etc.	Fluorine Coating & Moisture-Resistant Construction	Moisture-Resistant Construction	Fluorine Coating & Moisture-Resistant Construction	Fluorine Coating & Moisture-Resistant Construction		