TAMRON
LENS CATALOGUE 2016
BUILT TO IMPRESS
SUPER PERFORMANCE - STRIVE FOR EXCELLENCE

The lenses in our new SP Series unlock the full potential of high-resolution cameras for photographers. Advanced technologies such as VC image stabilisation, fast USD auto-focus and high-grade lens compensation ensure excellent imaging performance from every aperture. Using state of the art imaging technology, our SP technology is becoming the “creative eye” of photographers of all levels of experience.
Circular aperture

Tamron's high-precision VC image stabilisation (Vibration Compensation)

Splash-proof lens construction

Striking design and first-class build quality

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Tamron Lenses
EXPAND YOUR PHOTOGRAPHIC HORIZONS

Camera compatibility

The designation Di (Digitally Integrated) refers to a lens developed specially for the exacting requirements of digital cameras. Please ensure when purchasing that the lens has the correct mount for your camera system.

Di For all DSLR cameras with full-format and APS-C sensors
Di II For DSLR cameras with APS-C sensors
Di III For mirrorless system cameras

Some models cannot be used with all mounts. You can find an overview on pages 34-35.
Di lenses with built-in motors for Nikon and Di II lenses have no aperture ring.

LD (Low Dispersion) Lens Element

LD elements reduce chromatic aberrations such as colour fringes on the contrast edges and reduced image sharpness. The cause of these optical image faults is light of different wavelengths being broken at different points. Telephoto and wide-angle focal lengths are most affected by this. LD glass has a low colour dispersion index, which causes sharper imaging. The lens element effectively minimises unwanted colour fringes.

Super Performance - For discerning photographers

SP Tamron’s SP Series (Super Performance) meets the highest standards in photography. The lenses are built to precise specifications to meet the demands of professional photographers, with emphasis on the highest possible build quality. Tamron doesn’t compromise in quality or cost – we shoot for superior performance in every respect. The result is a range of lenses marked by impressive, innovative product design. Those looking for stellar performance need look no further than Tamron’s SP lenses.

XLD (eXtra Low Dispersion) glass

XLD XLD elements are made from high-performance optical glass with an extremely low colour dispersion index. Its refractive properties are similar to those in high-grade fluorite. This effectively prevents problematic chromatic aberrations. This means maximum image sharpness will be achieved, even at the edges of the photo.

Legend - Lens construction (see lens designs in this brochure)

- Hybrid aspheric lens
- LD element
- XLD element
- AD element
- XR element
- UXR element
- Aspheric ultra-precision moulded glass

Schematic diagram of the chromatic aberration with a normal optical glass (left) and an LD glass (right)
Hybrid aspheric elements for spectacular build quality and a compact design

Tamron lenses with the designation “aspherical” contain several aspheric hybrid lens elements. These are designed to all but completely remove imaging faults such as spherical aberrations in Tamron high-performance zoom lenses. A hybrid aspherical element can replace several other optical elements, contributing to a compact form factor and equally high build quality with all focal lengths and apertures. These innovative optics produce the best possible image quality in a compact form, all while retaining astonishingly large zoom ranges.

eBAND Anti-Reflex Coating

eBAND The nano-compensation process developed by Tamron allows a wafer-thin coating (1nm = 1/1,000,000mm) to be applied to the surface of the lens. The nano-structure has an ultra-low refractive index and ensures excellent anti-reflex properties in combination with the multi-layer compensation underneath. This effectively minimises undesired mirroring and ghost images.

BBAR - the key to first-class image quality

The innovative BBAR (Broad Band Anti-Reflection) multi-layer compensation from Tamron ensures that light that hits the surface of the lens is not reflected or dispersed. This means that loss of light and contrast are avoided and ghost images are prevented. BBAR multi-layer compensation also ensures the best possible colour balance, which results in natural and precise colour reproduction.

XR and UXR special glass for higher performance and more compact lens construction

XR UXR XR (eXtra Refractive Index) and UXR elements (Ultra eXtra Refractive Index) are optical glasses with a particularly high refractive index. Their properties allow a shorter overall length and therefore lighter lenses with smaller diameters, without changing the aperture size.

AD (Anomalous Dispersion) elements

AD Optical lenses with an abnormal level of dispersion make a significant contribution to reducing colour fringes (chromatic aberrations) at high light frequencies and improve overall imaging performance. The combination of AD glass elements with other lenses made from normal optical glass makes it possible to control light dispersion at specific wavelengths. Axial and lateral aberrations, which can be a particular problem when using telephoto lenses or wide-angle lenses, can be significantly reduced in this way.

Compensation for spherical aberrations

Compensation effect in a lens with an aspherical element (schematic diagram)

Compensation for distortion

Light’s refractive qualities mean that incident light rays that are not corrected can cause distortions. Tamron’s aspherical construction principle continuously balances these light rays’ angle of refraction.

Compensation for distortion

Comparison of partial dispersion factors with a normal optical glass (left) and an AD glass (schematic diagram)

XR and UXR special glass for higher performance and more compact lens construction

Optical lenses with a high level of dispersion make a significant contribution to reducing colour fringes (chromatic aberrations) at high light frequencies and improve overall imaging performance. The combination of AD glass elements with other lenses makes it possible to control light dispersion at specific wavelengths. Axial and lateral aberrations, which can be a particular problem when using telephoto lenses or wide-angle lenses, can be significantly reduced in this way.

Working mechanism of Tamron’s eBAND compensation (left) compared with a standard coating (schematic diagram).

Tamron’s eBAND compensation effectively prevents mirror images that can occur in back lit photographs as a result of reflections on the lens surfaces inside the lens.
Internal focusing - Many practical advantages

IF Internal focusing has a range of advantages for photographers: The lens is simpler to use because the extension length does not change when focusing. The lens filter ring does not turn with the lens when focusing, which makes it easier to take photos with polarisation and graduated filters. The shortest focusing distance over the entire focus area is significantly lower. Also, loss of light at the edges of the image (vignetting) and focus-related image defects are minimised.

Zoom-lock mechanism

Zoom-lock mechanism developed by Tamron stops the lens barrel from extending by itself when it is not being used. The lens is protected against damage and can still be attached quickly.

Multiple-cam mechanism - a stable and reliable chassis for zoom lenses

To make our compact, high-performance zoom lenses, we had to develop a lens chassis that allowed the barrel to extend evenly and smoothly. The Multiple-Cam mechanism allows several precision curves to be worked into a cylindrical surface. The mechanism allows very compact measurements for wide-angle lenses and precise extension of telephoto lenses.

Integrated Focus-Cam - Optimum Internal Focusing

The Integrated Focus-Cam System from Tamron synchronises the internal focusing movements with the Multiple-Cam mechanism. It helps to coordinate the smooth and precise positioning of all of the internal components with the external elements for zoom and focusing.

Step motor - perfect for videos

The step motor enables fine control over its rotation, as you might need, for example, for filming videos. This focusing drive works very quickly and quietly by extending without transmission gearing.

Vibration Compensation - The ultimate in image stabilisation, by Tamron

VC The VC (vibration compensation) mechanism developed by Tamron balances unwanted movement in diagonal, horizontal and vertical directions. The optical image stabilisation is controlled by highly-sensitive gyro sensors. The VC lens group utilises low-friction ball bearings, making the construction simple, effective and robust. Thanks to the VC mechanism, the photographer gains up to 4.5 f-stops when shooting by hand and gets an extremely stable viewfinder picture. Even in difficult photographic situations, you can focus all of your attention on the creative process.

SONY For a Sony mount without a VC image stabiliser, because Sony cameras already have an integrated image stabiliser.

Structure of the VC unit in model 16-300mm VC PZD

Focal length comparison

Top row: Full-frame format
Bottom row: APS-C format (crop factor 1.55)
* equivalent full-frame format
Piezo drive - faster and more compact AF motor

Tamron’s Piezo Drive (PZD) ultrasonic auto-focus motor lets us build an ultra-compact, high-performance lens. The abbreviation PZD can usually be found in the handy and simple Megazoom lenses, which cover an extraordinarily wide range of focal lengths. The motors are smaller and also benefit from fast auto-focus, high precision and almost complete lack of running noise.

The PZD ultrasonic motor is located in the rear of the lens, directly in front of the bayonet mount.

The diagram below shows the schematic construction of the PZD element.

Ultrasonic Silent Drive – High-performance focusing

Ultrasonic Silent Drive (USD) auto-focus motors are used in SP lenses. These high-performance drives convert ultrasonic waves into torque, enabling highly precise, fast and almost silent focusing. The principle uses a rotor and does not require a transmission between the motor and the focus ring. This means the photographer can change the focus setting at any time without having to press a switch. This makes USD lenses well suited for fast-moving and dynamic subjects, such as in nature and sports photography.

Well-protected against splashing water

“Moisture resistant” means that the lens is protected against penetration by splashing water. This is mainly visible in the seal on the fine rubber bead on the bayonet mount.

Fluorine compensation

Fluorine compensation was developed for optical systems in industrial production. It provides long-term protection to the front lens against oil and water. Any soiling won’t stick to the surface - you will be able to wipe it away easily.

TAP-in Console

Individual settings for your Tamron lens

Photographers can use the TAP-in Console to configure Tamron’s new SP Series for their own needs. The accessory lets them update firmware themselves using a computer for the first time, as well as adopting other configurations. Previously, this could only be done on-location at a Tamron Customer Service Centre. Depending on the lens, the individually configurable parameters include: Focus adjustment, setting the focus limiter, optimisation of the manual focus function and calibration of the VC image stabiliser.

The TAP-in Console can be used with all lenses in the new SP Series (F012, F013, F016, F017 and A022).

Download the software here:
http://www.tamron.co.jp/software/en/tapin/
NEW SP SERIES

SP 150-600mm G2 ∙ Focal length: 329mm ∙ Exposure: f/6.3 at 1/400 sec. ∙ ISO 1250
The beauty and power of nature

“As a fashion and lifestyle photographer, from the beginning I’ve been very excited about the versatile range of focal lengths the SP 150-600mm f/5-6.3 Di VC USD G2 offers. The zoom captures photos you don’t expect, that I couldn’t shoot with my other lenses. The enormous telephoto focal length doesn’t just bring far-away subjects into the picture in all their full-format glory, but increases the depth as well. The foreground and background look closer together - a fascinating effect that can be used creatively for lots of applications in photography.

I was really blown away by the image quality - you just don’t expect it from such a conveniently-sized super-zoom lens. Even with larger apertures, the pictures have an amazing sharpness and richness of detail. The new features of the VC image stabiliser mean I can take photos now in lots of situations without a tripod, and I don’t have to worry about any blurring from camera shake. If things get hectic, the new zoom lock function stops the focal length changing when I don’t want it to. The super-fast and precise auto-focus is just the icing on the cake - things like turbulence in the air don’t bother me at all any more. All of this makes the SP 150-600mm G2 ideal for capturing the lion’s powerful elegance in a photo.”

Thomas Kettner
Fashion- and Lifestyle-photographer
Hamburg
SP 150-600mm f/5-6.3 Di VC USD G2

The new generation of Tamron’s ultra-telezoom lenses. This incredible lens will win you over with its astounding optical performance and slick features.

**Premium optical construction**
The optical structure has 21 elements in 13 groups, including three LD glass elements. The closest focusing distance is just 220cm. The housing protects against dust and splashing water.

**Fast auto-focus and flexible VC image stabiliser**
Both the auto-focus performance and the VC image stabiliser have been improved in comparison with the first generation. The G2 version has three VC modes for different applications and allows up to 4.5 levels of longer shutter speed.

**Accessories for every occasion**
Two teleconverters with 1.4x and 2.0x focal length multiplication are available for the SP 150-600mm G2. These can be used to double the zoom area to 1200mm. The ultra-telezoom is also compatible with Tamron’s TAP-in Console.

### Focal length comparison: SP 150-600mm f/5-6.3 Di VC USD G2

The ultra-telezoom lens means you are never too far away to get a great close-up of your subject. The second generation of the SP 150-600mm has a first-class optical build and the auto-focus and VC image stabiliser have been improved even further. The front lens is equipped with fluorine compensation and the entire housing is protected against splashing water and dust.

- **Technical information:**
  - Elements/groups: 21/13
  - Closest focusing distance: 220cm
  - Filter diameter: 95mm
  - Length: 260.2mm
  - Weight: 2.010g

### Optional accessories
- 1.4x converter (Model TC-X14)
- 2.0x converter (Model TC-X20)
- TAP-in Console (Model TAP-01)
SP 35mm f/1.8 Di VC USD

Ideal for demanding reportage and lifestyle photography - the wide-angle lens sets new technical standards.

A large-aperture 35mm extremely high-quality prime lens, with built-in VC image stabilisation and USD ultrasonic motor. Thanks to the world’s shortest closest focusing distance in this lens class, at 20cm, you can take pictures that have the look of macro shots. The lens is properly protected against splashing water and the front lens can be cleaned easily thanks to fluorine compensation.

The SP 35mm offers the best image quality at only a distance of only 20cm to the subject, and can therefore be characterised as a wide-angle macro lens.

1 In comparison with currently available 35mm prime lenses for DSLR with full-format sensors, excluding macro lenses. As of July 2015, source: Tamron.
SP 45mm f/1.8 Di VC USD

A versatile standard lens. Suitable for situations in which maximum image quality is important.

Advanced optical design and use of special glass elements, including aspherical lenses and LD elements, are what make this excellent lens stand out. It is the first standard prime lens for full-format DSLRs in the world to be equipped with an image stabiliser, and the first lens of its class with a closest focusing distance of just 29cm. Like all models in the SP series, it also has exceptionally high built quality.

An enormous resolution and fine detail reproduction are what make the SP 45mm stand out.

1 As of July 2015, source: Tamron.
2 In comparison with current 45mm and 50mm prime lenses for DSLR cameras with full-format sensors. As of July 2015, source: Tamron.
SP 85mm f/1.8 Di VC USD

A top-class portrait lens. The perfect combination of high luminosity, a compact form factor and image stabilisation.

This large-aperture compact prime lens is ideally suited for demanding portrait shots with natural-looking proportions and colours. It is the first 85mm f/1.8 lens in the world with integrated image stabilisation. Its features include an excellent resolution and dreamy bokeh. An XLD and an LD glass element ensure consistently high imaging performance over the entire image area.

The SP 85mm’s large aperture means an optimum balance between sharpness and bokeh, perfectly separating the portrait subject from the background.

1 In comparison with currently available 85mm f/1.8 prime lenses for DSLR with full-format sensors, excluding macro lenses. As of January 2016, source: Tamron.
SP 90mm f/2.8 Di MACRO 1:1 VC USD

The pioneer of a new generation of macro lenses with extremely high resolution and detail reproduction.

We have used the most advanced technologies to really make this superb SP prime lens stand out. It carries the heritage of Tamron’s legendary series of 90mm macro lenses into the future. The VC image stabilisation is supported by XY-Shift compensation, which dramatically widens the range of applications. The housing is also protected against damp and dust, while fluorine compensation makes cleaning the lens a breeze.

**Technical information:**
- Elements/groups: 14/11
- Closest focusing distance: 30cm
- Filter diameter: 62mm
- Length: 114.6mm
- Weight: 600g

The SP 90mm has the best and most advanced features, as well as outstanding performance and imaging quality.
Sebastian Ritter & Jenny Mitschler
Travel bloggers
Berlin

Sensational Moments

“Enormous zoom, light weight - this is how the 16-300mm f/3.5-6.3 Di II VC PZD Macro won us over. As travel bloggers from 22places.de, we’re always on the road and we like to travel as light as possible. Tamron’s travel zoom means we don’t have to compromise any more.

The 16-300mm has a huge range of focal lengths (focal lengths 24.8mm to 450mm equivalent to full-format). That means you can capture great landscape photos and also very personal snapshots of street scenes. We can even take macro photos without having to change the lens first.

We captured so many sensational moments with the Tamron 16-300mm on our six-month Asia trip - from the Festival of Lights in Chiang Mai to the Chocolate Hills in the Philippines. We could take photos with slower shutter speeds thanks to the VC image stabiliser, and it reliably helped us avoid shaking when we were filming out of buses or trains. The images are sharp and very detailed. They show all these moments exactly as we experienced them at the time.”
Large zoom area from 16mm to 300mm

From ultra wide-angle to super telephoto - this high-performance zoom lens is suited for all kinds of subjects and photo opportunities. Both group shots at close proximity and photos of far-away details can now be photographed with a single lens.

Light and compact - stellar photography without the weight

540 grams with a total length of barely ten centimetres, this zoom lens is ideal for hiking and travelling light. The use of innovative optic elements, such as lenses made of XR glass and hybrid aspherical lenses, is what makes it so compact.

Fast PZD auto-focus and VC image stabiliser

Never miss a perfect moment again: Tamron’s Piezo Drive ultrasonic motor gives you lightning-fast focusing. The VC image stabiliser balances the smallest camera vibrations and shaking. Your telephoto-range shots will be sharp even in low-light conditions.

Focal length comparison: 16-300mm Di II VC PZD

Equivalent to 18.8x magnification of the subject

This extremely versatile megazoom lens for digital SLR camera with APS-C sensors covers a huge range of focal lengths from 16mm to 300mm¹. You can even shoot macro photos, thanks to the short minimum focusing distance of 39cm. Our newly developed aspherical elements and multi-layer compensated lenses guarantee excellent image quality.
28-300mm Focal length: 91mm ∙ Exposure: f/9 at 1/30 sec. ∙ ISO 100
28-300mm f/3.5-6.3 Di VC PZD

Versatile and compact high-performance zoom lens for single-lens reflex cameras with full-format sensors. Aspherical lenses ensure excellent picture quality over the entire range of focal lengths, from 28mm wide angle to 300mm telephoto. The VC image stabiliser balances undesired camera movement, ensuring sharp telephoto photography, even under low-light conditions.

18-200mm f/3.5-6.3 Di II VC

The world’s lightest megazoom lens offers a high-performance VC image stabiliser and a versatile focal length range from 27mm to 300mm.² The innovative optical construction ensures spectacular imaging performance, which is also helped along by the LD element. The use of an innovative hybrid aspherical lens contributes to a compact form factor.

18-270mm f/3.5-6.3 Di II VC PZD

A classic among megazoom lenses. The large focal length range of 27mm² wide angle up to 405mm² telephoto means no end of photographic opportunities. A fast auto-focus and built-in VC image stabiliser ensure sharp pictures, even under poor conditions. Special optical elements make for great imaging performance.

1 In comparison with other 18-200mm SLR lenses with optical image stabiliser. Source: Tamron, as of: June 2015

2 Focal length equivalent to small format.
14-150mm f/3.5-5.8 Di III

Compact, elegant megazoom lens with the best image quality for Micro Four Thirds System cameras. The 10.7x zoom covers a very large range of focal lengths from 28mm to 300mm. The optical construction contains LD and AD elements, as well as a hybrid aspherical lens. The combination gives you groundbreaking image quality.

18-200mm f/3.5-6.3 Di III VC

Light-weight megazoom lens with the best image quality for mirrorless APS-C system cameras from Canon and Sony. This excellent lens, with a 27-300mm focal length, is suitable for practically any photo situation. The compact housing has a modern, premium design and the system camera’s quick and precise contrast auto-focus is supported internally by a reliable step motor.

Advantages of Tamron Megazoom lenses

Large zoom range
Megazoom lenses have an outstanding range of focal lengths. For example, you can take photos with both a 24mm wide angle and with a 450mm telephoto focal length - all without changing the lens.

Light weight
Thanks to their special optical lenses, Tamron’s megazoom lenses weigh less than 550 grams. You’ll save space in your luggage as well, since you’ll be able to take great photos of any subject with just one lens.

Image stabilisation
The VC symbol means an integrated VC image stabiliser. This lets you take sharp pictures in low-light conditions, even without a tripod. Camera movements are substantially compensated so you can take handheld photos.

1 Focal length equivalent to small format.
Strong Prospects

“A good picture needs something special - and the SP 15-30mm f/2.8 Di VC USD gives me exactly that. The enormous 110 degree angle of view lets me to shoot really close to the subject, but to capture the environment as well. The depth of the pictures is breathtaking. You almost feel like you could reach into the photos.

The SP 15-30mm is one of the lenses I most often take with me on jobs. What was really important for me was the excellent image quality that the wide-angle zoom offers over the whole range of focal lengths. I often use back lighting, so the lenses’ high-grade compensation, which stops reflections and dispersion in the lens, is really important for me.

The pictures are clear and have high contrast even with the larger f/2.8. Whether I shoot from 28cm away or a hundred metres, I can depend on this large aperture lens to pick up the same fine detail.

VC image stabilisation is a real plus. It means taking sharp photos with long exposure times handheld, or even videos, with a moving camera isn’t a problem any more. In a word: The SP 15-30mm is a fixture in my photo bag.
SP 15-30mm f/2.8 Di VC USD
Professional wide-angle zoom for outstanding perspective. This wide-aperture f/2.8 lens expands Tamron’s SP Series in the low focal length range. A unique XGM lens element (eXpanded Glass Moulded Aspherical) reduces aberrations to a minimum and, in combination with the VC image stabiliser, provides peerless imaging performance.

Technical information:
Elements/groups: 18/13
Closest focusing distance: 28cm
Filter diameter: n/a
Length: 142.5mm
Weight: 1100g

SP 24-70mm f/2.8 Di VC USD
High-performance standard zoom with first-class imaging performance and features. The f/2.8 large aperture can be used even in low-light conditions and opens up creative opportunities with attractive blur effects. The image stabiliser minimises the risk of blurring from camera shake, while the USD auto-focus ensures fast, precise and quiet focusing.

Technical information:
Elements/groups: 17/12
Closest focusing distance: 38cm
Filter diameter: 82mm
Length: 108.5mm
Weight: 825g

SP 70-200mm f/2.8 Di VC USD
Versatile telephoto lens with f/2.8 aperture throughout and lots of modern features. The optical construction of the world’s most compact1 lens of its class contains a special XLD glass element and four LD elements, allowing top-class picture quality and contributing to a compact form factor.

Technical information:
Elements/groups: 23/17
Closest focusing distance: 130cm
Filter diameter: 77mm
Length: 188.3mm
Weight: 1470g

1 For high-speed DSLR telephoto lenses equipped with VC image stabiliser and USD auto-focus. As of October 2012, source: Tamron.
SP 150-600mm f/5-6.3 Di VC USD

Use this high-performance SP 150-600mm telephoto lens to capture the beauty of the animal world or gripping sports scenes. The VC image stabiliser and USD auto-focus will help you take sharp photos of fast-moving and far-away subjects without a tripod. Tamron’s optical technology, such as eBAND compensation, minimise light dispersion and other image defects and helps take clear, lively pictures.

**Technical information:**
- Elements/groups: 20/13
- Closest focusing distance: 270cm
- Filter diameter: 95mm
- Length: 257.8mm
- Weight: 1951g (including tripod mount ring)

SP 70-300mm f/4-5.6 Di VC USD

This compact telephoto lens is the first choice for photo enthusiasts wanting to capture far-away subjects full-size in a photo. Equipped with VC image stabilisation and USD auto-focus, you can take sharp, lively photos in a variety of situations. XLD and LD glass elements help reduce optical image defects.

**Technical information:**
- Elements/groups: 17/12
- Closest focusing distance: 190-cm
- Filter diameter: 62mm
- Length: 142.7mm
- Weight: 765g
AF70-300mm f/4-5.6 Di LD MACRO

The 1:2 macro function telephoto lens is the ideal addition to a standard lens. This model combines high mechanical quality with outstanding optical properties. The macro switch-over mechanism at focal ranges 180-300mm lets the photographer photograph the subject from just 95cm away.

Technical information:
- Elements/groups: 13/9
- Closest focusing distance: 150cm (95cm macro)
- Filter diameter: 62mm
- Length: 116.5mm
- Weight: 458g

Model A17

SP AF 28-75mm f/2.8 XR Di LD asph. [IF] MACRO

This standard zoom with f/2.8 aperture puts the fun in photography. It has a high resolution capacity and high contrast reproduction. Its optical construction minimises colour fringing and loss of brightness at the edge of the photo. Its minimum focusing distance is just 33cm, so you can take fascinating close-up and macro photos.

Technical information:
- Elements/groups: 16/14
- Closest focusing distance: 33cm
- Filter diameter: 67mm
- Length: 92mm
- Weight: 510g

Model A09
SP AF 70-200mm f/2.8 Di LD [IF] MACRO

With a length of just 195mm, this lens is one of the most compact 70-200mm telephotos. Despite its modest dimensions, it has a large aperture and high sharpness and resolution. The low minimum focusing distance of just 95cm means you can take close-up shots with a magnification of 1:3.1.

Technical information:
- Elements/groups: 19/14
- Closest focusing distance: 29cm
- Filter diameter: 72mm
- Length: 94.5mm
- Weight: 570g

SP AF 17-50mm f/2.8 XR Di II VC LD asph. [IF]

This large-aperture standard zoom covers all of the most popular focal lengths, from 25.5mm to 75mm\(^1\). The large f/2.8 aperture lets you play creatively with effects like blur, such as when you take telephoto portrait shots. Combined with the VC image stabiliser, the photographer has everything they need for sharp photos, even in low light.

Technical information:
- Elements/groups: 16/13
- Closest focusing distance: 27cm
- Filter diameter: 67mm
- Length: 83.2mm
- Weight: 440g

SP AF 17-50mm f/2.8 Di II LD asph. [IF]

Compact standard zoom lens, best suited for photography in low light with f/2.8 aperture. The large aperture allows good extraction of the subject and prevents blurring caused by camera shake with the short exposure times. Special optical elements make for first-class imaging performance.

Technical information:
- Elements/groups: 12/9
- Closest focusing distance: 24cm
- Filter diameter: 77mm
- Length: 86.5mm
- Weight: 406g

SP AF 10-24mm f/3.5-4.5 Di II LD asph. [IF]

You’ll have the most fun with your photos, and get some fantastic perspectives, with this ultra-wide-angle zoom lens. An optical lens made of aspherical precision pressed glass allows a huge angle of view of 108 degrees - great for photo compositions that will really pull the viewer into the frame. BBAR compensation gives you bright and sharp photos right up to the edge of the image.

Technical information:
- Elements/groups: 18/13
- Closest focusing distance: 95cm
- Filter diameter: 77mm
- Length: 194.3mm
- Weight: 1320g

\(^1\) Focal length equivalent to small format.
SP AF 90mm f/2.8 Di MACRO 1:1
This tried and tested version of Tamron’s classic 90mm macro lens is the ideal universal lens for ambitious photographers. The optical structures include ten elements in nine groups, making for excellent imaging performance. The minimum focusing distances is just 29cm, so you can photograph even small objects at an image ratio of 1:1.

Technical information:
Elements/groups: 10/9
Closest focusing distance: 29cm
Filter diameter: 55mm
Length: 97mm
Weight: 400g

SP AF 180mm f/3.5 Di LD [IF] MACRO 1:1
A unique telemacro lens that is just as well-suited to use outdoors and in the studio. At an image ratio of 1:1, it has a particularly long shooting distance and was specially developed for photographing timid subjects such as butterflies and other insects, to which you wouldn’t be able to get close enough with a normal macro lens.

Technical information:
Elements/groups: 14/11
Closest focusing distance: 47cm
Filter diameter: 72mm
Length: 165.7mm
Weight: 985g
(Including tripod mount ring)

SP AF 60mm f/2 Di II LD [IF] MACRO 1:1
This lens offers a special look at the subtleties in nature. You can use it to project your subjects life-size (1:1 image ratio) onto the sensor at a distance of 23cm. The high speed and large aperture will give you wonderful blur effects and sharp photos without a tripod, even in low light.

Technical information:
Elements/groups: 14/10
Closest focusing distance: 23cm
Filter diameter: 55mm
Length: 80mm
Weight: 350g
GUARANTEE AND SERVICE

5 year warranty
The quality of Tamron lenses is guaranteed. Tamron also offers a free extension of the guarantee period to five years. To claim the extended guarantee, register your lens within two months of purchase on the Tamron registration website. You will then be entitled as part of the 5 year guarantee to our services in the following countries: European Union, Norway, Iceland, Turkey, Ukraine, Andorra and Gibraltar.
Register on: 5years.tamron.eu

Customer service
If you have questions about Tamron products or the services we offer, please contact our Services: Tamron Europe GmbH, Service Department, Telephone: +49 (221) 970325-35, email: service@tamron.de Mon-Thurs 8.30am – 5pm, Fri 8.30am – 3.30pm

Repairs
Tamron products are manufactured with utmost care and precision. Should there be any damage to your lens nonetheless, Tamron Customer Service will be happy to assist you. You can find contact addresses and more detailed information on the guarantee and the procedure for sending in the product and having it repaired at: www.tamron.eu/de/service

Tamron’s quality assurance and environmental protection activities
- ISO standards: The abbreviation ISO is short for International Organization for Standardization. The relevant international standards include the ISO 9000 family for quality management systems and the ISO 14000 family for the certification of environmental management. Tamron is certified under ISO 9000 and ISO 14000.
- Environment: Tamron takes environmental matters seriously and supports the implementation of operating procedures according to ISO 14001 to protect the environment. Specifically, Tamron has adopted a “green purchasing directive”, under which environmentally unfriendly materials are avoided from the beginning of the process and positive contributions to the environment are encouraged. During production, Tamron endeavours to keep energy use as low as possible, avoid excessive waste and use recyclable materials where possible. These measures contribute to the development of high-value, compact and environmentally friendly products to satisfy our customers. Since 2004, Tamron has been producing environmental reports in which we publish social responsibility initiatives and practices to protect our environment. You can find more information on these on Tamron’s English-language website: (www.tamron.co.jp/en/envi/top/)
- ISO 14001 Environmental management: Tamron includes in its corporate philosophy the goal of offering high-quality products and services that meet the demands of our customers. Beyond this, Tamron’s employees consistently champion the protection of our global environment on every level and in every aspect of our company’s activities. Tamron is conscious of its social responsibilities and takes them seriously.
- ISO 14001 - The basis of environmental protection:
  1. Compliance with relevant environmental provisions
  2. Conservation and protection of natural resources
  3. Avoidance of damage to the environment
  4. Continuous promotion of environmental protection programme
  5. Construction and development of environmentally friendly products as a contribution to environmental protection
  6. Training and instruction to involve all employees
  7. Publication of ecologically relevant information

About Tamron
- Lenses for digital cameras and video cameras
  Tamron is a leading supplier of high-performance optics that meet the highest quality standards of modern sensors. Tamron also produces light and compact zoom lenses with high performance and excellent image quality for video cameras.
- CCTV lenses
  Tamron uses advanced technologies to develop revolutionary lenses that meet the special requirements of the security sector and industry automation. This includes a comprehensive range of CCTV lenses, including IR lenses, lenses compatible with high-resolution cameras and motorised zoom lenses.
- Lenses for long-wave infrared cameras
  We have used our expertise as manufacturers of optical products to develop the world’s first lenses with VC image stabilisation for LWIR cameras. We have a wide range of products and will continue to develop high-quality optics in the future.
- Lenses for automotive construction applications
  Vehicles all over the world are equipped with cameras today that offer an array of features for image recognition and increasing driving safety. Tamron uses its high-precision manufacturing technologies to maintain its position as a leading manufacturer of lenses for vehicle construction.
- Optical products
  Tamron develops and produces a comprehensive range of advanced and high-precision optical equipment. This includes various aspherical lenses, special prisms, devices for lasers, dichroic mirrors for colour separation, polarisers, special multi-layer thin-film coatings and test plates for fast and precise inspection of lens surfaces.
<table>
<thead>
<tr>
<th>LENSB</th>
<th>PAGE</th>
<th>MODEL</th>
<th>FOCAL LENGTH mm</th>
<th>ANGLE OF VIEW</th>
<th>LARGEST APERTURE</th>
<th>SHAPE OF BLADES</th>
<th>MINIMUM APERTURE</th>
<th>WEIGHT AND DIAMETER X LENGTH (TOTAL LENGTH)</th>
<th>COMMENT</th>
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<tbody>
<tr>
<td>Di</td>
<td>26</td>
<td>A012</td>
<td>15–30</td>
<td>110°32’–71°35’</td>
<td>1/2.8</td>
<td>9 rounded blades</td>
<td>22</td>
<td>108.4 × 257.7 (Nikon)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>A007</td>
<td>24–70</td>
<td>84°19’–42°21’</td>
<td>1/2.8</td>
<td>9 rounded blades</td>
<td>22</td>
<td>65 × 142.5 (sigma)</td>
<td></td>
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<tr>
<td></td>
<td>29</td>
<td>A009</td>
<td>28–75</td>
<td>75°23’–32°11’</td>
<td>1/2.8</td>
<td>9 rounded blades</td>
<td>32</td>
<td>79.0 × 114.6 (Canon)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>A010</td>
<td>28–300</td>
<td>35°23’–8°15’</td>
<td>1/3.5–6.3</td>
<td>7 rounded blades</td>
<td>40</td>
<td>98.4 × 195.1</td>
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</tr>
<tr>
<td></td>
<td>26</td>
<td>A009</td>
<td>70–200</td>
<td>34°21’–12°21’</td>
<td>1/2.8</td>
<td>9 rounded blades</td>
<td>32</td>
<td>105.6 × 257.8 (Nikon)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>A001</td>
<td>70–200</td>
<td>34°21’–8°15’</td>
<td>1/4–5.6</td>
<td>9 rounded blades</td>
<td>32</td>
<td>89.5 × 194.3 (Pentax)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>A005</td>
<td>70–300</td>
<td>34°21’–8°15’</td>
<td>1/4–5.6</td>
<td>9 rounded blades</td>
<td>32</td>
<td>105.6 × 257.8 (Nikon)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>A17</td>
<td>70–300</td>
<td>34°21’–8°15’</td>
<td>1/4–5.6</td>
<td>9 rounded blades</td>
<td>32</td>
<td>89.5 × 194.3 (Pentax)</td>
<td></td>
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<tr>
<td></td>
<td>12</td>
<td>F012</td>
<td>35</td>
<td>63°26’–10°21’</td>
<td>1/1.8</td>
<td>16</td>
<td>16</td>
<td>108.4 × 257.7 (Nikon)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>F013</td>
<td>45</td>
<td>51°21’–9°24’</td>
<td>1/1.8</td>
<td>16</td>
<td>16</td>
<td>84.0 × 168.6 (sigma)</td>
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<tr>
<td></td>
<td>14</td>
<td>F016</td>
<td>85</td>
<td>28°33’–6°29’</td>
<td>1/1.8</td>
<td>16</td>
<td>16</td>
<td>79.0 × 114.6 (Canon)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>F017</td>
<td>90</td>
<td>27°10’–5°16’</td>
<td>1/2.8</td>
<td>9 rounded blades</td>
<td>32</td>
<td>79.0 × 114.6 (Canon)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>272E</td>
<td>90</td>
<td>27°2’–9°17’</td>
<td>1/2.8</td>
<td>9 rounded blades</td>
<td>32</td>
<td>89.5 × 194.3 (Pentax)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>B01</td>
<td>180</td>
<td>13°42’–9°27’</td>
<td>1/3.5</td>
<td>32</td>
<td>32</td>
<td>98.4 × 195.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>A011</td>
<td>150–600</td>
<td>16°25’–4°18’</td>
<td>1/5–6.3</td>
<td>9 rounded blades</td>
<td>32–40</td>
<td>108.4 × 257.7 (Nikon)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>A022</td>
<td>150–600</td>
<td>10°38’–2°45’</td>
<td>1/5–6.3</td>
<td>9 rounded blades</td>
<td>40</td>
<td>105.6 × 257.8 (Nikon)</td>
<td></td>
</tr>
</tbody>
</table>

Notes

The use of Di and Di II lenses with mirrorless compact camera systems is not recommended. The use of a conversion adapter (mount adapter, converter etc.) should also be avoided.

1. The Sony mounts A005, A007, A009, A010, A012, A012, B008, B016, F012, F016, F018, F017, A022 are supplied without a VC image stabiliser, as Sony's digital single lens reflex cameras are already fitted with an internal image stabiliser. As a consequence, the abbreviation "VC" is missing in these lens designations.
2. Compatible with the TAP-in Console
3. The blades form an almost circular shape when the aperture is open.
4. Shortest focusing distance over the entire range of focal lengths.
5. Weight including the removable tripod mount ring.
6. The length is defined from the contact face on the camera housing to the tip of the lens.

Notes on model B011

When using the AFC mode (Continuous AF) with 18-200mm Di III VC, please note:
- When using the scene program "Sports Mode" during continuous focusing, "pumping" of the image may occur on the LCD monitor display. If this occurs, it will not affect the quality of the image that is produced.
- The same effect may be observed in any of the Shoot Modes (P, A, S, M) when Continuous AF (AF-C) is used. The effect will not affect the photos taken in this situation either.
- As an alternative to the situation described above, the focus mode can be set to Single-Shift AF (AF-S) or Direct Manual Focus (DMF).
<table>
<thead>
<tr>
<th>LENS CONSTRUCTION</th>
<th>ELEMENTS/GROUPS</th>
<th>SHORTEST MINIMUM FOCUSING DISTANCE cm</th>
<th>MAX. IMAGE RATIO</th>
<th>FILTER SIZE Ø mm</th>
<th>WEIGHT g</th>
<th>DIAMETER × LENGTH mm</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>18–13</td>
<td>28 ¹</td>
<td>1.5</td>
<td>N/A</td>
<td>1100</td>
<td>98.4 × 142.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17–12</td>
<td>38 ¹</td>
<td>1.5</td>
<td>82</td>
<td>825</td>
<td>88.2 × 108.5</td>
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</tr>
<tr>
<td>16–16</td>
<td>433 ³</td>
<td>1.39</td>
<td>67</td>
<td>510</td>
<td>73.0 × 92.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19–15</td>
<td>49 ³</td>
<td>1.35</td>
<td>67</td>
<td>540</td>
<td>74.4 × 98.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23–17</td>
<td>130 ³</td>
<td>1.8</td>
<td>77</td>
<td>1470 ³</td>
<td>85.8 × 188.3</td>
<td>Lens version with Pentax mount without aperture ring.</td>
<td></td>
</tr>
<tr>
<td>18–13</td>
<td>95 ³</td>
<td>1.31</td>
<td>77</td>
<td>1320 ³</td>
<td>89.5 × 194.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17–12</td>
<td>150 ³</td>
<td>1.4</td>
<td>62</td>
<td>765</td>
<td>81.5 × 142.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13–9</td>
<td>150 (firm lens)</td>
<td>1.2</td>
<td>62</td>
<td>458</td>
<td>76.6 × 118.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10–9</td>
<td>20</td>
<td>1.25</td>
<td>67</td>
<td>450</td>
<td>80.4 × 78.3</td>
<td>Compatible with TAP-in Console (sold separately)</td>
<td></td>
</tr>
<tr>
<td>10–8</td>
<td>29</td>
<td>1.34</td>
<td>67</td>
<td>520</td>
<td>80.4 × 89.2</td>
<td>Compatible with TAP-in Console (sold separately)</td>
<td></td>
</tr>
<tr>
<td>13–9</td>
<td>80</td>
<td>1.72</td>
<td>67</td>
<td>660</td>
<td>84.8 × 88.8</td>
<td>Compatible with TAP-in Console (sold separately)</td>
<td></td>
</tr>
<tr>
<td>14–11</td>
<td>30</td>
<td>1.1</td>
<td>62</td>
<td>600</td>
<td>79.0 × 114.6</td>
<td>Compatible with TAP-in Console (sold separately)</td>
<td></td>
</tr>
<tr>
<td>10–9</td>
<td>29</td>
<td>1.1</td>
<td>62</td>
<td>400</td>
<td>71.5 × 97.0</td>
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<td></td>
</tr>
<tr>
<td>14–11</td>
<td>47</td>
<td>1.1</td>
<td>72</td>
<td>985 ³</td>
<td>84.8 × 165.7</td>
<td>AF motor is not integrated in the SP AF 150mm.</td>
<td></td>
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<tr>
<td>20–13</td>
<td>270 ³</td>
<td>1.5</td>
<td>95</td>
<td>1951 ³</td>
<td>105.6 × 257.8</td>
<td>Accessories sold separately. • Tripod mount ring (long version) • Soft case A011</td>
<td></td>
</tr>
<tr>
<td>21–13</td>
<td>220 ³</td>
<td>1.39</td>
<td>95</td>
<td>1980 ³</td>
<td>108 ³ × 207.7 (Canon)</td>
<td>Accessories sold separately. • 1.4x teleconverter • 2.0x teleconverter Compatible with TAP-in Console (sold separately)</td>
<td></td>
</tr>
<tr>
<td>12–9</td>
<td>24 ³</td>
<td>1.51</td>
<td>77</td>
<td>408</td>
<td>83.2 × 86.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16–13</td>
<td>39 ³</td>
<td>1.29</td>
<td>67</td>
<td>540</td>
<td>75.0 × 99.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19–14</td>
<td>29 ³</td>
<td>1.48</td>
<td>72</td>
<td>570</td>
<td>79.6 × 94.5</td>
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</tr>
<tr>
<td>16–13</td>
<td>27 ³</td>
<td>1.45</td>
<td>67</td>
<td>440</td>
<td>73.8 × 83.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18–14</td>
<td>49–77</td>
<td>1.4</td>
<td>62</td>
<td>400</td>
<td>75.0 × 94.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16–13</td>
<td>49 ³</td>
<td>1.38</td>
<td>62</td>
<td>450</td>
<td>74.4 × 88.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14–10</td>
<td>23</td>
<td>1.1</td>
<td>55</td>
<td>350</td>
<td>73.0 × 80.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17–13</td>
<td>50 ³</td>
<td>1.38</td>
<td>52</td>
<td>285</td>
<td>63.5 × 80.4</td>
<td>Available in two colour versions: Black and Silver; ° angle of view for aspect ratio 4 : 3</td>
<td></td>
</tr>
<tr>
<td>17–13</td>
<td>50 ³</td>
<td>1.37</td>
<td>62</td>
<td>460 **</td>
<td>68.0 × 96.7 **</td>
<td>Available in two colour versions: Black and Silver; ° weight and diameter × length (total length) values apply to the corresponding model with Sony fitting.</td>
<td></td>
</tr>
</tbody>
</table>

Be careful if the camera shows an error message or if the LCD monitor goes blank (for Canon lenses). In very rare cases, malfunctions can occur if signal transmission between the camera and the lens does not work correctly. If this occurs, please do one of the following to solve the problem:

- Switch the camera off.
- Ensure there is no dirt or oil on the signal contacts in the lens and/or the camera.
- If the problem continues, please switch the camera off and remove the battery. Re-insert the battery and switch the camera back on.

**Lens hoods**

All Tamron lenses are supplied with a lens hood as standard that is made specially for the specific lens. This lens attachment prevents lateral light rays entering the lens and thereby minimises the risk of dispersion and ghost images on the inside of the lens harming the quality of the image. On lenses with internal focusing (IF), the lens hood is somewhat longer and is tulip-shaped, preventing shadowing in the corners of the picture.