

# Scope

## Model Comparison

### with Specifications | 6-24x | \$300-500

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Link on GTA: ..... | Link on AGN: ..... | Link on AGW: .....

## Features Considered

- Price: Between \$300 and \$500. The price was the cheapest I found clicking the first 20 links. The price range has been chosen to obtain a certain level of glass quality and mechanical precision, without braking the bank (of course there are 6-24x50 scopes for \$100, though often they do not have side parallax). Scopes of any price range can be bought for much less during special offers from [www.DVOR.com](http://www.DVOR.com). Buying a used scope, especially from trusted people at gun forums, is another way to cut down on the price.
- Top end magnification: 20x or more
- Bottom end magnification: 6x or less | For a discussion of magnification ranges and the field of view, cf.: <https://www.gatewaytoairguns.org/GTA/index.php?topic=150721>
- Objective diameter: 50mm or more. Reason: For a magnification of 24x the exit pupil is already very small, thus the shooter has to position his/her eye almost perfectly. The smaller the objective diameter, the less tolerance there is for the shooter for eye placement.
- Exit pupil: should not be too small, Bob Sterne recommends 3 mm, 2 mm is marginal. This relates directly to the eye box, the small area where your eye has to be in order to see the full scope image. Bob Sterne recommends 3 mm, 2 mm is marginal. [Calculation: objective lens diameter / magnification = exit pupil]
- Turret adjustment range: 50 MOA (15 MIL) seems to me an absolute minimum, but 70 MOA (21 MIL) would be already much better: This is important if (a) the gun is a drooper, and (b) for dialing the elevation turret for long range shooting (for 100 yards with heavy pellets/ slugs adjustable scope mounts are still necessary, even with 70 MOA)
- The reticle should have plenty of horizontal and vertical hash lines/ dots, for windage and elevation hold offs: in the table sufficient dots are indicated by "D" = "Dots"
- The hash lines/ dots in the reticle can be numbered, for quicker hold overs: in the table abbreviated with N = "Numbers"
- Both turrets and reticle should "speak" the same language, either both "speak" MOA, or the speak MIL (MRAD); mixing makes no sense; discrepancies are indicated in the table with ≠
- First focal plane (FFP) – or – second focal plane (SFP)
- Field of view (FoV): The larger the easier the target acquisition. For how this relates to scope magnification ranges, cf.: <https://www.gatewaytoairguns.org/GTA/index.php?topic=150721>
- Calibration of the turret clicks: how much does the reticle move for 1 click (at 100y)
- Amount of clicks per one turret revolution: uneven numbers like 6 mils, or 14 moa, are not helpful when making large adjustments of two or more revolutions; an additional feature that some have is a turret turn counter
- Tube diameter 30mm only (not 1", nor 33mm, 34mm, etc.): All on the list have it.
- Illuminated reticle: for dark woods, low light, and night hunting helpful
- Weight: (I ask myself: How important is it that my gun-scope combo is light? Have I ever complained on a hunting trip that the can of soda I was carrying weighted 14oz instead of 10? Were those 4oz really that important?)
- Parallax adjustment distance: from 10/11y or less on to infinity: All on the list have it.
- Side parallax adjustment (vs. front parallax adjustment): All on the list have it.
- Exposed turrets, so that the turret settings (the numbers) are visible from behind the gun at all times, and can be changed without taking off caps and screws. Scopes with capped turrets apparently are not made to be clicked/ dialed without re-zeroing them: All on the list have it.
- Turrets with zero reset: All on the list have it.

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## 6-24x | \$300-\$500

Brand: Series	Price \$	Magnification	Obj. ∅ Dia (mm)	Exit Pupil (mm) → Eyebow	Elev. Adjust-ment Range (in MOA)	Reticle: Enough Dots, Numbers	Reticle: in:	Turrets: in:	FFP? (First Focal Plane)	FoV= <sup>Fi</sup> eld of View @ 100y (ft)	Clicks (inch / mil)	1 Turn =	1" or 30 mm	IR	Weight (oz) (g)	Misc. + Reviewers' "Comments"
UTG	209	6-24	56	8.3-2.2	??	D	MIL ≠	≠ MOA	SFP	14.7-4.7	1/8"	15moa	30	✓	32.2 <sup>910</sup>	
MTC: Viper Pro	570	5-30	50		42	D	MIL ≠	≠ MOA custom.	SFP		1/4"	10 moa	30	✓	30.7 <sup>889</sup>	Customizable Turrets
MTC: Viper Pro Tactical	50 less than Viper Pro	5-30	50		42	D	MIL ≠	≠ MOA	SFP		1/4"	10moa	30	✓	25.8 <sup>732</sup>	not customizable
Aztec: Emerald [their only one]	400	5.5-25	50		c. 40?	D, N	MOA	MOA	SFP	19.1-4.2	1/4"	15moa	30	–	25.4	"Low DoF"
Aeon: AO	250	5-25	56		???		MIL ≠	≠ MOA	Both		1/4"	15moa	30			
Sun Optics: At least 3 scopes		6-24	50		???				SFP				30	✓		
Nikko Stirling: Diamond Long Range	250	6-24	50		40				SFP				30	✓	27.8	
Nikko Stirling: Target Master 30"	300	5-20	50		60				SFP		1/8"		30	✓	25.0	
Nikko Stirling: Target Master 30"	290	6-24	56		50→64	NO	MIL	Both but how to order one?	SFP				30	✓	27.2	
Nikko Stirling: Diamond FFP	300	6-24	50		50	OK	MIL	MIL	FFP	18.3-4.5	0.1mil		30	✓	24.0	
Nikko Stirling: C-More X10	410	2-20	44	22-2.2 <sup>calc</sup>	60	D	MIL ≠	≠ MOA	SFP	47.0-4.7	1/4"		30	✓	25.7 <sup>730</sup>	
Nikko Stirling: C-More X10	507	3-30	56		50	D	MIL ≠	≠ MOA	SFP	31.0-3.1	1/8"		30	✓	34.2 <sup>970</sup>	
Bushnell (XX): Engage	450	6-24	50		50	D	MOA ≠	≠ MIL	SFP	18.0-4.0	1/8"		30	–	23.7 <sup>672</sup>	
Hawke (UK): Sidewinder 30 SF	439	6-24	56	9.0-2.0	62	D	MIL	≠ MOA	SFP	14.8-4.4	1/4"	15moa	30	✓	29.8 <sup>844</sup>	IR w/ Prtlx wheel
Hawke (UK): Airmax 30 SF	408	6-24	50	8.0-2.0	65	D	MIL	≠ MOA	SFP	17.3-4.5	1/4"	15moa	30	✓	26.7 <sup>757</sup>	"small Eyebow"
Optisan: EVX, GEN 2: 6-24X50 F1	560	6-24	50	8.3-2.1	50	D, (N)	MIL	MIL	FFP	19.4-4.9	0.1mil	4.5mil	30	–	26.5	
Optisan: EVX, GEN 2: 6-24X56i	470	6-24	56	9.3-2.3	50	D, (N)	MIL	MIL	SFP	19.4-4.9	0.1mil	4.5mil	30	✓	29.2	IR w/ Prtlx wheel
Optisan: EVX, GEN 2: 5-20X50i	440	5-20	50	10.0-2.5	50	D, (N)	MIL	MIL	SFP	23.0-5.8	0.1mil	4.5mil	30	✓	27.0	IR w/ Prtlx wheel
Optisan: EVX, GEN 1: 6-24X50 F1	500	6-24	50		50	D, (N)	MIL	MIL	FFP	36.7-9.2 ??error?	0.1mil		30	–	24.3	
Optisan: EVX, GEN 1: 6-24X50 F1i	540	6-24	50		50	D, (N)	MIL	MIL	FFP	19.4-4.9	0.1mil		30	✓	28.0	
Optisan: EVX, GEN 1: 6-24X56i	410	6-24	56		50	D, (N)	MIL	MIL	SFP	19.4-4.9	0.1mil		30	✓	29.2	
Optisan: EVX, GEN 1: 5-20X50i	400	5-20	50		50	D, (N)	MIL	MIL	SFP	23.0-5.9	0.1mil		30	✓	27.0	
Sightron: S-TAC Reticle: MOA Reticle: Duplex	395 327	4-20	50	X.X-2.5	80	D	MOA	MOA	SFP	23.6-4.4	1/4"	15 moa	30	–	23.6 670	
Aeon: AO Classic Rifle: AEO-624x50TRAJ [PY-A-5488]	200	6-24	50		100	Weird Trajct R.	MOA	MOA	SFP	16.0-4.2	1/4"	15moa ?	30		26.0 740	"Not for Clicking"
Vector Optics: Counterpunch: SCFF-03A	280	6-25	56	9.2-2.4	70	too small	MOA	MOA	FFP	18.6-4.9	1/4"	6 mil	30	✓	32.3	
Vector Optics: Counterpunch: SCFF-03C	340	6-25	56	9.2-2.4	70	D	MIL	MIL	FFP	18.6-4.9	1/4"	6 mil	30	✓	32.3 915	
Athlon: Argos BTR Warranty: Full, no receipt needed.	297	6-24	50	8.2-2.1	60	D, N	Both MIL or MOA	Both MIL or MOA	FFP	16.7-4.5 → @ 10m 0.6m	0.1mil	5 mil	30	✓	29.6 840	"Tracks" "Wide DoF" "small Eyebow" T Turn Counter
Vortex: Diamondback Tactical	400	6-24	50	8.3-2.1 calc.	65	D, N	Both MIL or MOA	Both MIL or MOA	FFP	18.0-4.5	1/4" / 0.1?	5 mil	30	N O	24.6 700	Zero Stop. "Repeatable" "small Eyebow"
Konus (Italy): Pro F30 *Demo Product	420*, 590 340 DVOR.com	6-24	52	8.3-2.2	58	D	MIL	MIL	FFP	14.8-4.3	0.1mil	5 mil	30	✓	26.8 760	Cant Bubble Large Parallax Turret
Falcon (UK): Menace: No. M25B; M25IR (=IR)   *from Mfctr, scratched, with SH, have 2, now 4 ****Demo "B" (US), newer	394*, 416, 538 276 Used, 223 Used, Older 350**	5.5-25	56	10.2-2.2 calc.	60	D, N	MIL	MIL	FFP	19.0-4.8	0.1mil	10 mil old: 6 mil	30	N O + ✓	33.5 950	"Tracks" T Turn Counter
Falcon (UK): S30: No. S3001 S/H incl. from Cyprus	377*, 446 to GER 423 to US	5-30	56	11.2-1.9 calc.	57	D, N	MIL	MIL	FFP	24.0-3.9	0.1mil	10 mil	30	N O	32.5 920	T Turn Counter
Hawke (UK): Sidewinder 30 FFP [≠ SFI]	500 460 Refurb	6-24	56	9.0-2.0	60	D	MIL	MIL	FFP	15.7-4.5	0.1mil	5 mil	30	✓	31.1 880	
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