

Scope Specs Table

for glr59 aka Jerry

with FFP 16x ^(18x/20x) max. —
or with SPF Calibrated at 16x

with 10y-Side Parallax (no exceptions)

with Exposed Turrets

with Holdoff Reticle

\$300–\$500(–\$800)

January 4, 2025 | Matthias aka JungleShooter | Airgunner@zohomail.com

▲ Explanation of the abbreviations of the table at the end of the document! ▲

				Magni. → FoV → Eye Box			Exposed Turrets				Holdoff Reticle				Dimensions					
in 2019, some 2020, 2021, 2022, 2023	Price: Low; Mfctr.'s in US \$	War-ranty	Springer-Rated	Magni-fication	FoV =Field of View @ 100y (ft)	Obj. Dia (mm)	Exit Pupil (mm)	IR Y, N	Max. Elev. Adj. (MOA)	1 Click =	1 T. Turn =	Turrets in:	Reticle in:	FFP Thick O/S Posts? – SFP Calibration at ?	Enough Dots, No's, Grid CD CenterDot	Line Thick-ness	Tube Dia-meter	Weight (oz) (g)	Length (inch) (cm)	Misc. + Reviewers' "Comments"
SFP Scopes																				
Sightron: S-TAC [SFP!] •Ret. MOA-3	450; 520	Life	Yes!!	3-16x	32-6	42	?	NO	70	¼ moa	15 moa	MOA =	=MOA	SFP 16x	D	.02 ^{mi} .08 ^{mo}	30	23.5 666g	12.9" 33c	Daling Turrets (capped w/ ^{N1}) T Turn Counter
Vector: Taurus HD No. 500M-243	393; 449	Life		2-16x	62-7.7	50	8-3.1	Y	100	0.1 mil	6 mil	MIL =	=MIL	SFP 16x	D, N, Grid, CD	.03 ^{mi} .10 ^{mo}	30	27.0 766g	13.3" 34c	0-Stop
Element: Helix •Ret. APR-1C MRAD No. 50053 •Ret. APR-1C MOA No. 50054	589; ?	Life, NoRec.		2-16x	60-7.5	50	8 ^S -3.1	Y	100 wind 45moa	0.1mi ¼mo	6mi 15mo	MIL =	=MIL MOA =	=MOA SFP 16x	D, N, CD	.03 ^{mi} ?	30	25.6 726g	13.4" 34c	Turn Counter; 0-Stop – does this limit the max. adjustment??
FFP Scopes – without Thick Outside Posts in the Reticle																				
Hawke: Vantage 30 WA FFP IR No. 14300	398; 469	Life, R. 0.Own	<12 FPE	4-16x	33-8	50	12-3.1	Y	86	0.1 mil	6 mil	MIL =	=MIL	FFP No Thick Posts	D	?	30	26.3 745g	13.7" 35c	
Hawke: Airmax 30 FFP SF No. 13350	510; 569	Life, R. 0.Own	Yes!!	4-16x	32-8	50	12-3.1	Y	70	0.1 mil	6 mil	MIL =	=MIL	FFP w/ odd spacing No Thick Posts	D	?	30	26.6 755g	13.7" 35c	Capped Turrets! BUT Clickable
Hawke: Sidewinder 30 FFP •FFP Half Mil Ret. No. 17450 •FFP MOA Ret. No. 17451	599; 799. 697; 799	Life, R. 0.Own	Yes	4-16x	32-8	50	13-3.1	Y	90	0.1mi ¼mo	6mi 15 mo	MIL =	=MIL MOA =	=MOA FFP No Thick Posts	D, Grid	?	30	25.6 725g	13.3" 34c	T Turn Counter

				Magni. → FoV	→ Eye Box	Exposed Turrets			Holdoff Reticle			Dimensions								
in 2019, some 2020, 2021, 2022, 2023	Price: Low; Mfctr.'s in US \$	Warranty	Springer-Rated	Magnification	FoV = Field of View @ 100y (ft)	Obj. Dia (mm)	Exit Pupil (mm)	IR Y, N	Max. Elev. Adjmt. (MOA)	1 Click =	1 T. Turn =	Turrets in:	Reticle in:	FFP Thick O/S Posts? - SFP Calibration at ?	Enough Dots, No's, Grid CenterDot	Line Thickness	Tube Diameter	Weight (oz) (g)	Length (inch) (cm)	Misc. + Reviewers' "Comments"
Brand: Series	Part No.																			
FFP Scopes – with Thick Outside Posts in the Reticle																				
Optisan: EVX4-16X44F1 (MIL-F1MH16)	490; 550	Life	?	4-16x	27-7	44	11-2.7	NO	50	0.1 mil	5 mil	MIL =	=MIL	FFP ¹⁹ Thick O/S Posts	D, (N)		30	24.0 680g	14.2" 36c	
Arken: EPL4 •MIL VHR Ret. •MOA VHR Ret.	350, 300; 400	Life		4-16x	30-7 ⁵	44	?	Y	86	0.1mi 1/4mo	8 mi 20mo	MIL =	= MIL MOA =	FFP ³⁶ Thick O/S Posts	D, N, CD	.03 ^{mi} .10 ^{mo}	30	23.7 672g	13.2" 34c	0-Stop; 3 screws to re-zero; T Turn Counter
Sightron: S-TAC: [FFP!] •Ret. MIL	660; 800	Life		4-20x	22-4	50	?	Y	80 (40 wind age)	0.1 mil	5 mil	MIL =	=MIL	FFP Thick O/S Posts	D, N	.035 ^{mi} .12 ^{mo}	30	25.6 725g	15.0" 38c	T Turn Counter 0-Stop
Shepherd (US): BRS •BRS-MIL Ret. •BRS-MOA Ret.	449; 549	Life, Own		4-16x	25-7	44	?	Y	65	0.1mi 1/4mo	6 ² mil 15 mo	MIL =	=MIL MOA =	FFP ¹² Thick O/S Posts	D, N, Grid	.05 ^{mi} .16 ^{mo} ? ?	30	23.6 670g	13.8" 35c	T Turn Counter Locking Turrets
Swampfox (US): Kentucky Long •Sharpsh. Grid Ret. MIL •Sharpsh. Grid Ret. MOA	428; 529	Life (50000 rounds)		3-18x	35-6	50	11-2.2	Y	110	0.1mi 1/4mo	6 mi 15mo	MIL =	=MIL MOA =	FFP ²² Semi Thick Posts	D, N, Grid	?	30	28.2 800g	14.8" 38c	Locking Turrets
Sightron: S-TAC: FFP Zero Stop •Mil-Hash-2 Ret. No. 260117-S-TAC3-16x42FFZSPMH •Moa-5 Ret. No. 26020-S-TAC3-16x42ZSFFPIRMOA	580; 670	Life		3-16x	29-6	42	?	Y	70	0.1mi 1/4mo	5 mi 15 mo	MIL =	=MIL MOA =	FFP Thick O/S Posts	D, N	.05 ^{mi} .17 ^{mo} .03 ^{mi} .10 ^{mo}	30	24.8 703g	13.3" 34c	0-Stop T Turn Counter
Athlon: Midas TAC No. 213070	590; 737	Life, NoRec.	?	4-16x	28-7	44	11-1.8 error	NO	100	0.1 mil	10 mil	MIL =	=MIL	FFP ⁸ Thick O/S Posts	D, N, CD	.04 ^{mi} .14 ^{mo}	30	23.8 669g	14.3" 36c	True 0-Stop T Turret Counter Windage Capped
Shepherd (US): BRS •BRS-MIL Ret. •BRS-MOA Ret.	799; 850	Life, Own		3-18x	35-6	50	?	Y	100	0.1mi 1/4mo	6 ² mil 15 ² mo	MIL =	=MIL MOA =	FFP ²⁸ Thick O/S Posts	D, N, Grid	? ? .05 ^{mi} .19 ^{mo}	34	31.0 880g	13.5" 35c	T Turn Counter; Locking Turrets
Element: Titan •MIL Ret. APR-2D •MOA Ret. APR-2D	800; –	Life, NoRec.		3-18x	41-7	50	17-2.8	Y	150	0.1mi 1/4mo	10mi 25mo	MIL =	=MIL MOA =	FFP ³⁴ Thick O/S Posts	D, N, Grid, CD	?	34	34.4 976g	14.6" 37c	0-Stop – limits the max. adjst.?? Toolless Re-zero; T Turn Counter
Athlon: Helos BTR Gen. 2 •APRS6 MIL Ret. •APLR6 MOA Ret. No. 214108	500, 570; 750	Life, NoRec.		4-20x	28-6	50	?	Y	100	0.1mi 1/4mo	10 mi 25 mo	MIL =	=MIL MOA =	FFP Thick O/S Posts	D, N, Grid	.05 ^{mi} .17 ^{mo} .05 ^{mi} .17 ^{mo}	30	27.6 782g	13.3" 34c	0-Stop; T Turn Counter
Swampfox (US): Warhawk •Sharpsh. Grid Ret. MIL •Sharpsh. Grid Ret. MOA No. TWK42050-3M	??; 659	Life (50000 rounds)		4-20x	32 ⁰ - 7 ²	50	13-2.4	Y	90	0.1mi 1/4mo	10 mi 25 mo	MIL =	=MIL MOA =	FFP ²⁴ Semi Thick Posts	D, N, Grid	?	34	32.8 930g	15.0" 38c	Locking Turrets
Vector: Continental X6 FFP No. SCFF-28	?; 800	Life, NoRec.		3-18x	41-7	50	8-2.8	Y	146	0.1 mil	10 mil	MIL =	=MIL	FFP ¹³ Thick O/S Posts	D, N, Grid	?	30	28.9 820g	13.3" 34c	0-Stop with 68moa Limit Locking Turrets
Vortex: Strike Eagle •EBR-7C MIL Ret. No. SE-31802 •EBR-7C MOA Ret. No. SE-31801	750; 850	Life, NoRec.		3-18x	39-7	44	?	Y	154 ⁶² Windage	0.1mi 1/4mo	10 mi 25 mo	MIL =	=MIL MOA =	FFP Thick O/S Posts	D, N, Grid CD	.03 ^{mi} .10 ^{mo} .04 ^{mi} .15 ^{mo}	34	27.3 774g	13.3" 34c	0-Stop; Toolless Re-zero; T Turn Counter; Windage Capped
Brand: Series	Part No.																			
*in 2019, some 2020, 2021, 2022	Price: Low; Mfctr.'s in US \$	Warranty	Springer-Rated	Magnification	FoV = Field of View @ 100y (ft)	Obj. Dia (mm)	Exit Pupil (mm)	IR Y, N	Max. Elev. Adjmt. (MOA)	1 click =	1 T. Turn =	Turrets in:	Reticle in:	FFP Thick O/S Posts? - SFP (Calibration)	Enough Dots, No's, Grid CenterDot	Line Thickness	Tube Diameter	Weight (oz) (g)	Length (inch) (cm)	Misc. + Reviewers' "Comments"

Notes About Different Scopes – N1, N2, N3, etc.:

N1: Sightron ExacTrack turret adjustment system: Though the turrets of the indicated scope are capped, they are made for *dialing*, because they use the same ExacTrack turret adjustment system as the uncapped scopes of the following series (as of the 2012 and 2022 catalog): S-TAC | SVIII [S8] | S6 | SV [S5] | SIII [S3] | SII [S2] | SII Big Sky

Reticles: Footnotes: Links for Views or Videos of FFP Reticles at Different Magnifications

- Note: Sometime in 2022 I began to save some reticle links in the following web archive, so that even if manufacturers or seller deleted the webpage or changed the URL, the link was still accessible through the archive, here:

<https://archive.org/web/web.php>

- Note on more detailed reticle diagrams:

- Athlon: Each scope on their homepage includes detailed diagrams: <https://athlonoptics.com>
- Discovery: many scopes reticles are listed here: <https://discoveryoptics.co.uk/reticles/>

¹ Vector: Taurus: 3-18x50 FFP: Reticle at all magnifications: @ 7.59min:

<https://www.youtube.com/watch?v=SOOdqEcXgU4>

² Blackhound: 4-14x44 FFP: Reticle at min. and max. magnification:

- Alpha MIL reticle (like in the 6-24x50, the Blackhound page has an error here, and like the MOA and the 6-24x50 FFP – the 4-14x44 FFP most likely has the thick posts:

<https://www.blackhoundoptics.com/product/genesis-6-24x50-ffp-mil>

- Ascent MOA reticle: <https://www.blackhoundoptics.com/product/genesis-6-24x50-ffp-moa/>

³ Primary Arms: Silver Series: 3-18x50 FFP: Apollo 6.5CM MIL Grid reticle: Reticle at min. and max. magnification:

<https://www.primaryarms.com/pa-3-18x50mm-illuminated-ffp-rifle-scope-with-acss-apollo-6-5cm-reticle>

⁴ Primary Arms: Silver Series: 4-14x44 FFP:

- R-Grid 2B reticle: <https://www.primaryarms.com/slx3-5-4-14x44mm-first-focal-plane-rifle-scope-with-illuminated-r-grid-2b-reticle>
- MIL-DOT reticle: <https://www.primaryarms.com/primary-arms-4-14x44mm-riflescope-mil-dot-pa4-14x44>
- ARC-2-MOA reticle: <https://www.primaryarms.com/primary-arms-4-14x44mm-ffp-riflescope-arc-2-moa-reticle>

⁵ Hawke: Sidewinder SF FFP [No. 17410]: 4-16x50: Reticle at min. and max. magnification:

<https://us.hawkeoptics.com/sidewinder-30-sf-ffp-riflescopes.html>

⁶ Falcon: S18i 3-18x50 FFP: Reticle at all magnifications: @ 2:06min:

<https://www.youtube.com/watch?v=RGmnOFp2fUU>

⁷ Athlon: Talos BTR Gen. 2 4-14x44 FFP:

APLR2 MIL Grid: Reticle at min. and max. magnification:

<https://athlonoptics.com/product/talos-btr-gen2-4-14x44-aplr2-ffp-ir-mil/>

APLR10 MOA Grid: Reticle at min. and max. magnification:

<https://athlonoptics.com/product/talos-btr-gen2-4-14x44-aplr10-ffp-ir-moa/>

⁸ Athlon: Midas TAC 4-16x44 FFP: APRS2 MIL: Reticle at min. and max. magnification:

<https://athlonoptics.com/product/midas-tac-4-16x44-mil/>

⁹ Discovery: HD: 4-20x50 SFIR FFP: Reticle at all magnifications: @ 2:42min:

https://www.youtube.com/watch?v=C1qBt7yg_ek

¹⁰ Monstrum: FFP-G1: 4-14x44: (No. FFPS41444-M): Reticle at min. and max. magnification:

https://web.archive.org/web/20191122043510/https://cdn11.bigcommerce.com/s-r7nbep7374/images/stencil/1280x1280/products/252/2002/MONSTRUM-TACTICAL-4-14X44-FFP-FIRST-FOCAL-PLANE-RIFLE-SCOPE-FFPS-HUNTING-AR-15-LR-3083_95364.1551303891.jpg?c=2

¹¹ Arken: SH4: 4-14x44 FFP: Reticle at all magnifications: 2:53min:

<https://www.youtube.com/watch?v=VpJRPnOOgso>

¹² Shepherd: BRS: 4-16x44 FFP: Reticle at min. and max. magnifications:

BRS-MIL Ret.: <https://shepherdsopes.com/wp-content/uploads/2020/04/4-16x44-BRS-MIL-Reticle.jpg>

Also: <https://shepherdsopes.com/wp-content/uploads/2021/03/BRS-4-16-IR-Mil-Instructions.pdf>

BRS-MOA Ret.: <https://shepherdsopes.com/wp-content/uploads/2020/04/4-16x44-BRS-MOA-Reticle.jpg>

- ¹³ Vector: Continental 34mm: 3-18x50: Reticle at min. and max. magnifications:
<https://www.vectoroptics.com/data/uploads/2020/06/22/1592831083.jpg>
- ¹⁴ Vector: Veyron: 4-16x44 FFP: Reticle at min. and max. magnifications:
<https://www.vectoroptics.com/rifle-scopes/Veyron-4-16x44-IR-First-Focal-Plane-Riflescope-Illuminated-SCFF-38.html>
- ¹⁵ Vector: Taurus: 4-24x50 FFP: Reticle at min. and max. magnification: @ 0:37min (play at slowest playback speed, the min. magnification will be shown only for a *split second* – but shows how thin the outside post really are, they are not really “medium”:
<https://www.youtube.com/watch?v=rZRVuR5-398>
- ¹⁶ Discovery: HD/34mm: 3-18x50 FFP: Reticle at all magnifications: 0:35min:
<https://www.youtube.com/watch?v=2PZWxIWHfPc>
- ¹⁷ [free]
- ¹⁸ Nikko: Diamond FFP: Nikko's *Skeleton HMD* reticle is used in several scopes and it does not have thick outside posts; the double lines used are just as thin as the rest of the reticle. Here is an example of the *Skeleton HMD* reticle, in the Diamond FFP 30mm 6-24x50: Reticle at different magnifications: 6x: @ 13:44min | 16x: @ 14:14min | 24x: 14:31min:
https://www.youtube.com/watch?v=VOy2IWN7N_c
- ¹⁹ Optisan: EVX 4-16X44F1 (MIL-F1MH16): Reticle at all magnifications: @ 4:36min
<https://www.youtube.com/watch?v=K1yoMv-VP2Y>
- ²⁰ Monstrum: FFP-G3: 4-14x44 No. G3F41444: Reticle at min. and max. magnification:
https://cdn11.bigcommerce.com/s-r7nbep7374/images/stencil/1280x1280/products/454/2468/Type-H-reticle_4-14x44_99131.1570125176.jpg?c=2
- ²¹ Discovery: VT-3: 4-16x50 FFP: Reticle at all magnifications (the operator of the camera sometimes does not achieve to focus the camera on the reticle, but after about a minute he gets it focused even at low magnification): @ 18:13min and 23:38min
<https://www.youtube.com/watch?v=5NIOftFLZc>
- ²² Swampfox: Kentucky Long: 3-18x50 FFP:
Cf. the other models of this series that have the same six-fold magnification range, resulting in the same ratio of reticle increase/decrease:
Kentucky Long: 5-30x56 FFP: MOA Reticle: Reticle at all magnification: @ 3:16min:
<https://www.youtube.com/watch?v=riYsEFSXYyw>
and the very similar Swampfox: Kentucky Long: 2-12x44 FFP: MOA: Reticle at 2x and at 12x(?):
<https://images-na.ssl-images-amazon.com/images/I/71%2B5YMUAXfL.AC.SL1500.jpg>
<https://images-na.ssl-images-amazon.com/images/I/71aX%2BZ5aDFL.AC.SL1500.jpg>
- ²³ [free]
- ²⁴ Swampfox: Warhawk: 4-20x50 FFP:
Currently no reticle images of this particular scope. However, cf. the Swampfox Warhawk 5-25x56 FFP: MOA Reticle: at 5x: @ 1:04min (very briefly, use slo-mo, or pause it):
<https://www.youtube.com/watch?v=fFh5jleVgxE>
Cf. also the same reticle in the Kentucky Long models (several videos available; however the Warhawk has only a five-fold magnification range, as opposed to the Kentucky Long's six-fold, which means the reticle will increase/decrease 17% less).
- ²⁵ Swampfox: Warhawk: 3-15x50 FFP:
Currently no reticle images of this particular scope. However, cf. the Swampfox Warhawk 5-25x56 FFP: MOA Reticle: at 5x: @ 1:04min (very briefly, use slo-mo, or pause it):
<https://www.youtube.com/watch?v=fFh5jleVgxE>
Cf. also the same reticle in the Kentucky Long models (several videos available; however the Warhawk has only a five-fold magnification range, as opposed to the Kentucky Long's six-fold, which means the reticle will increase/decrease 17% less).
- ²⁶ Hawke: Frontier 30 FFP: 5-15x50, Mil Pro 15x Reticle [No. 18520]:
No video found so far, however, cf. the link below for the same reticle in an FFP scope (4-20x), however there the reticle has to cover a 5-fold magnification range and thus will be much smaller at the bottom end of the magnification, and much larger at the top end than the present 3-15x scope that only has a 3-fold magnification range.
Hawke: Frontier 30 FFP: 4-20x50, Mil Pro 20x Reticle [No. 18530]c: at 4x to 20x: @ 7:55min | And illuminated at night and during daylight: @ 9:09min:

<https://www.youtube.com/watch?v=E9SLP7RiaWg>

- ²⁷ Hawke: Frontier 30 FFP: 4-20x50, Mil Pro 20x Reticle [No. 18530]: at 4x to 20x: @ 7:55min | And illuminated at night and during daylight: @ 9:09min:
<https://www.youtube.com/watch?v=E9SLP7RiaWg>
- ²⁸ Shepherd: BRS: 3-18x50 FFP: Reticle at min. and max. magnifications:
BRS-MIL Ret.: [not found yet]
BRS-MOA Ret.: https://shepherdscopes.com/wp-content/uploads/2020/04/Reticle_BRS_MOA.jpg
Also: <https://shepherdscopes.com/wp-content/uploads/2021/03/BRS-3-18-Instructions.pdf>
- ²⁹ Element: Helix: 4-16x44 FFP: MIL and MOA Ret.: Reticle at min. and max. magnifications: In the *Manual* on the webpage, pp. 15-16:
<https://element-optics.com/wp-content/uploads/2021/07/HELIX-4-16x44-FFP-MANUAL-.pdf>
- ³⁰ Discovery: ED: 3-15x50 SFIR FFP: Reticle at all magnifications:
@ 3:04min (2018-06): <https://www.youtube.com/watch?v=kdIDJIPEUtE>
@ 1:04min (2019-01): https://www.youtube.com/watch?v=2fYkPggy_o
- ³¹ Hawke: Frontier 34 FFP: 3-18x50, Mil Pro Ext. Reticle [No. 18620]: Reticle at all magnifications, illuminated:
@ 2:02min:
<https://www.youtube.com/watch?v=3ztkmBiv4lk>
- ³² Athlon: Ares ETR UHD 3-18x50 FFP:
APRS6 MIL Ret.: Reticle at min. and max. magnification: <https://newsite.athlonoptics.com/product/ares-etr-3-18x50-aprs6-ffp-ir-mil-uhd/>
APLR6 MOA Ret.: Reticle at min. and max. magnification: <https://newsite.athlonoptics.com/product/ares-etr-3-18x50-aplr6-ffp-ir-moa-uhd/>
- ³³ Riton: 7 Conquer: 3-18x50 FFP:
Reticle Subtensions:
T3 MIL Ret.: <https://ritonoptics.com/wp-content/uploads/2019/12/7Conquer3-18x50.RitonOptics.ReticleSubtensions.jpg>
PSR MIL Ret.: <https://ritonoptics.com/wp-content/uploads/2019/12/7-Conquer-3-18x50-PSR-PSR-02.jpg>
- ³⁴ Element: Titan: 3-18x50 FFP:
MIL APR-2D Ret.: Reticle at all magnifications: @ 14:11min and IR @ 8:17min
<https://www.youtube.com/watch?v=NY5K9qED3RU>
Reticle at min. and max. magnification: Brochure p. 15:
https://element-optics.com/wp-content/uploads/2022/07/5x7-TITAN-3-18x50-MANUAL_lr.pdf
MOA APR-2D Ret.: Reticle at min. and max. magnification: Brochure p. 16:
https://element-optics.com/wp-content/uploads/2022/07/5x7-TITAN-3-18x50-MANUAL_lr.pdf
- ³⁵ Meopta: Optica6: 3-18x56 RD FFP: Reticle Subtensions:
https://www.meoptasportoptics.com/Aton/FileRepository/aton_file_repository_HtmlEditorRepositoryDoc/Root/Reticles/reticle-MRad1-RD.pdf
- ³⁶ Arken: EPL4: 4-16x44 FFP:
MIL VHR: Reticle Subtensions:
https://www.arkenopticsusa.com/ipx/w_1920,q_100/https%3A%2F%2Fcdn.sanity.io%2Fimages%2Fu57cw5zd%2Fproduction%2Fdaa6661e721237bec2a01cfd12962abab2540216-4005x4005.png%3Fauto%3Dformat&url=https%3A%2F%2Fcdn.sanity.io%2Fimages%2Fu57cw5zd%2Fproduction%2Fdaa6661e721237bec2a01cfd12962abab2540216-4005x4005.png%3Fauto%3Dformat&w=1920&q=100
MOA VHR: Reticle Subtensions:
https://www.arkenopticsusa.com/ipx/w_1920,q_100/https%3A%2F%2Fcdn.sanity.io%2Fimages%2Fu57cw5zd%2Fproduction%2F3917883977bc6e2f37f55eab92830f303f99d20d-4005x4005.png%3Fauto%3Dformat?url=https%3A%2F%2Fcdn.sanity.io%2Fimages%2Fu57cw5zd%2Fproduction%2F3917883977bc6e2f37f55eab92830f303f99d20d-4005x4005.png%3Fauto%3Dformat&w=1920&q=100
- ³⁷ Apex: The Hunter 3-15x44: Reticle at 15x:
<https://apexoptics.co/hunter3-15/#reticle>

Abbreviations in the Table

Green is a good thing... – e.g.: a very good warranty, a shorter size or lighter weight than average for this magnification range, a larger than average elevation adjustment range, a very wide field of view (FoV), or some additional feature (bubble level, zero stop [0-Stop], turret turn counter [T Turn Counter], numbers on the hash lines of the reticle [N]), etc.

Red is less of a good thing... – e.g.: a not so great warranty, a longer size or heavier weight than average, a smaller than average elevation adjustment range, a very narrow field of view (FoV), or some other negative or limiting feature, like: a small exit pupil (reducing the eye box), a min. parallax longer than 10y, a reticle without illumination, capped turrets, an FFP reticle without thick outside posts, or a price higher than the max. price that was set for this scope table), etc.

Purple is something noteworthy that could be either good or bad, depending on the shooting scenario... – e.g.: an objective lens that is exceptionally small or large for its magnification (e.g., a small lens allows less light to enter, and reduces the need to focus to correct parallax errors), or an exceptionally short or long eye relief (affecting the scope mounting location and eye/head placement), etc.

Orange is a caution flag, a marginal feature or characteristic... – e.g.: warranty limitations, a marginal FoV, a smaller objective diameter for (supposedly) less light than average for the magnification range, an uneven number of mils or moas per turret turn (not multiples of 5mil or 10moa), a price so low as to shed doubt on the quality of the scope, etc.

SFP vs. **FFP** = table starts with **SFP** (*second focal plane*) scopes, then *first focal plane* (**FFP**)

Thick O/S Posts [for **FFP**] = thick black outside posts, i.e., 3 or 4 of the crosshairs are thick toward the outside (the posts are not hollow rectangles, but filled in with black), which allows seeing the crosshairs easily even when at low magnification. Some have no thick posts, and some have *semi thick* posts.

10x [or 16x, or another number] [for **SFP**] = the magnification at which the holdoff hash lines or dots have been calibrated, i.e., where 1 moa indicated on the reticle actually is 1.047" in reality at 100 yards

Series and Part No. = the manufacturer's product or parts number; helpful to identify the scope at a seller's page as some scopes are very similar and the seller's description is either misleading or insufficient to identify the scope with certainty; also for shopping for the lowest price it helps to enter the number in the search

Discont. = product has been discontinued (but still could be purchased used)

Warranty Info: **Life** = life time warranty | **5y** = 5 years warranty | **OOwn** = warranty only for the original owner | **Unlmt** = unlimited warranty | **Anyb.** = warranty applies to any owner, anybody (e.g., even if you bought it used) | **NoRec.** = no receipt (proof of purchase) required | **Rec.** [or: **R.**] = receipt (proof of purchase) required | **30d** = must register the scope within 30 days of purchase

FoV = Field of View (in ft at 100y):

- **FoV @ bottom magnification:**

A large FoV at the bottom end of the magnification range is important for *hurried close range shooting*, as the large FoV helps rapid target acquisition. Note that a wide FoV is not critical for *unhurried shooting*, i.e., shooting on stationary targets (or quarry that isn't skittish and gives the shooter time to set up the shot).

The color coding in the table is based on my very personal, unabashedly subjective estimation: *For my kind of hurried close range shooting* I'd like to have a FoV of at least around 3ft at 10y (1m at 10m) (which translates to around 30ft @100y, as FoV is usually reported at 100y; it is color coded black).

The color coding at the bottom end of the magnification is applied irrespective of the scope's magnification, so naturally 6-24x scopes for example don't usually get a green rating, but orange or red. Note however that there are sometimes huge differences in FoV between scopes with the same magnification range which makes the bottom end magnification an unreliable indicator of FoV when scope shopping.

41ft or more	40-35ft	34-28ft	27-22ft	21-17ft	16ft or less
7.8° or more	7.7-6.7°	6.6-5.3°	5.2-4.1°	4.0-3.2°	3.1° or less

- **FoV @ top magnification:**

Between two scopes with the same top end magnification the one with a larger FoV is preferable, all other things being equal. This is because the larger FoV might allow to see more clues to how the wind is behaving, or allows to see additional quarry, or makes following the quarry easier if it decides to move. The color coding in the table is based on what is typical for this magnification, i.e., what I have observed to be average for this top magnification.

Examples: At 16x a FoV of 6.3ft normal, whereas a FoV of **4.7ft** is rather narrow and limited. A FoV of **8.5ft** would be great.

Color Coding for the Evaluation of FoV at the <i>Top End</i> Magnification																																				
Magnification	1							8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	36	40	44	48	52	56	60	64				
Magnification	1							8								16								32								64				
“times life size”	1x							8x	9x	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	36	40	44	48	52	56	60	64				
Evaluation of Field of View (FoV): Top End* FoV @ 100y																																				
FoV in ft	from worst to best							ft				ft				ft				ft				ft												
red bold	red/orange gets this evaluation if the value is as indicated or worse							8.5	8	7.5		6			5	4.6	4.2	4.0	3.9		3.7			2.8	2.8											
red								9.5	9	8.5		7			5.8	5.2	4.7	4.5	4.4		4.1			3.2	3.2											
orange								10.5	10	9.5		8			6.5	5.9	5.4	5.2	4.9		4.5			3.6	3.6											
Typical Value		color black						13	12	11		9		8	7.1	6.3	5.9	5.5		4.9			4	4												
green	green gets this evaluation if the value is as indicated or better							15	14	13	12	11	10	9	8.1	7.2	6.7	6.2		5.3			4.1	4.1												
green bold								17.5	17	15.5		13			10.1	9.3	8.5	7.7	7		5.7			4.4	4.4											
Magnification	1							8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	36	40	44	48	52	56	60	64				

IR = illuminated reticle [Y = yes | **NO**]

Reticle; Ret. *D* = "dots" = enough dots or hash lines on the crosshairs for holdoffs for elevation and windage

N = "numbers" = the dots or hash lines are numbered for quicker holdoffs

Grid = the reticle is a grid style ("Christmas tree style"): for some shooters and for scope cams it "clutters" the reticle, but it allows for more precise elevation *and* windage holdoffs simultaneously

CD = "center dot" = the crosshairs use a *dot* at the center where the two crosshairs intersect

BDC = bullet drop compensating reticle, meaning that the spacing between the hash lines is uneven and therefore not usable for holdoffs unless shooting the ammo the reticle was calibrated for

Capped Turrets! BUT Clickable = means that though the turrets are capped, when uncapped they are finger adjustable, the numbers are visible from behind the rifle, and the zero can be reset

Hawke scopes: Careful when purchasing them, new or used. Hawke has the annoying habit of coming out with new scope models but fails to either add the designation "Gen. 2" or to give them a new series name. In addition they have the habit of adding a couple of innocuous letters or numbers to the name of the scope – which mean massive changes in the features or the performance. These letters or numbers are easy to miss for both the buyers and commercial and private sellers. To assure you are getting the scope with the features you are thinking you are getting, check that the manufacturer's model number is the correct one. The Scope Specs Table notes the numbers for most scope models for that very reason.

Prices

In US dollars

Price Low = lowest *street prices* in US dollars I found in 2019 – and updated according to the list below. An additional price is separated by a *comma* ,

Price Mfctr. 's = manufacturer's price [last price in that field, after the semicolon ;]

Prices and/or models updated as follows: 2021-06: Hawke | 2021-07: Shepherd | 2022-12: Riton | 2022-12:

Element | 2023-07: Discoveryopt, aka Discovery | Primary Arms