

ideas for vision

				Turret Magification Factor (x)									
STELLA OPH			0.40		0.60		1.0		1.60		2.50		
Binocular Focal Length (MM)	Objective Focal Length (MM)	Eyepiece M ag (X)/FOV. mm	Total Mag (X)	Field MM	Total Mag (X)	Field MM	Total Mag (X)	Field MM	Total Mag (X)	Field MM	Total Mag (X)	Field MM	
140	175	10/18	3.2	56.3	4.8	37.5	8.0	22.5	12.8	14.1	20.0	9.0	
140	200	10/18	2.8	64.3	4.2	42.9	7.0	25.7	11.2	16.1	17.5	10.3	
140	175	12.5/18	4.0	56.3	6.0	37.5	10.0	22.5	16.0	14.1	25.0	9.0	
140	200	12.5/18	3.5	64.3	5.3	42.9	8.8	25.7	14.0	16.1	21.9	10.3	

Finding Total Magnification

The following formula is used to calculate the total magnification of the system :

Total Magnification = (Binocular Focal Length/Objective Focal Length) X (Eyepice Magnification) X (Magnification Factor)

for example: Binocular Focal Length =140 mm

Objective Lens Focal Length =200 mm

Eyepiece Magnification =10X

Total Magnification= (140/200) X (10x) X (0.6)

Therefore: Total Magnification = 4.20X

STELLA N				Turret Magification Factor (x)									
				0.40		0.60		1.0		1.60		2.50	
Binocular Focal Length (MM)	Objective Focal Length (MM)	Working Disctance(MM)	Eyepiece Mag (X)/FOV. MM	Total Mag (X)	Field MM	Total Mag (X)	Field MM	Total Mag (X)	Field MM	Total Mag (X)	Field MM	Total Mag (X)	Field MM
170	290-485	200-400	10/18	1.4 to 2.3	76.8 to 128.4	2.2 to 3.7	49.1 to 82.2	3.5 to 5.9	30.7 to 51.4	5.6 to 9.4	19.2 to 32.1	8.8 to 14.7	12.3 to 20.5
170	290-485	200-400	12.5/18	1.8 to 2.9	76.8 to 128.4	2.7 to 4.6	49.1 to 82.2	4.4 to 7.3	30.7 to 51.4	7.0 to 11.7	19.2 to 32.1	11.0 to 18.3	12.3 to 20.5

Finding Total Magnification

The following formula is used to calculate the total magnification of the system :

Total Magnification =(Binocular Focal Length/Objective Focal Length) X (Eyepice Magnification) X (Magnification Factor)

for example: Binocular Focal Length =170 mm

Objective Lens Focal Length =290 mm
Eyepiece Magnification =12.5X

Total Magnification= (170/290) X (12.5x) X (2.5)

Therefore: Total Magnification = 18.31X