

	GEM45	GEM45EC	GEM45G
Mount	German Equatorial Mount	German Equatorial Mount	German Equatorial Mount
Max payload*	20 kg (44.1 lbs), exclude counterweight	20 kg (44.1 lbs), exclude counterweight	20 kg (44.1 lbs), exclude counterweight
Mount weight	7.2 kg (15.8 lbs)	7.2 kg (15.8 lbs)	7.9 kg (17.4 lbs)
Payload/Mount weight	2.78	2.78	2.53
Structure Material	All metal, CNC machined	All metal, CNC machined	All metal, CNC machined
Exterior Finish	Anodized red/black	Anodized red/black	Anodized red/black
Latitude adjustment range	14° ~ 68°	14° ~ 68°	14° ~ 68°
Azimuth adjustment range	± 6°	± 6°	± 6°
Tracking accuracy (PE)**	<±7 arcsec	<0.25 arcsec RMS	<±7 arcsec
PEC	PPEC	Real time PEC	PPEC
Period	400 sec	400 sec	400 sec
Worm diameter	Φ17mm, Brass	Φ17mm, Brass	Φ17mm, Brass
Right Ascension worm wheel	Φ110mm, 216 teeth, zero backlash	Φ110mm, 216 teeth, zero backlash	Φ110mm, 216 teeth, zero backlash
Declination worm wheel	Φ110mm, 216 teeth, zero backlash	Φ110mm, 216 teeth, zero backlash	Φ110mm, 216 teeth, zero backlash
Right Ascension axis shaft	Φ45mm steel	Φ45mm steel	Φ45mm steel
Declination axis shaft	Φ45mm steel	Φ45mm steel	Φ45mm steel
Right Ascension bearings	Φ68mm	Φ68mm	Φ68mm
Declination bearings	Φ68mm	Φ68mm	Φ68mm
Counterweight shaft	Φ28X280 mm, Stainless Steel (1.2 kg)	Φ28X280 mm, Stainless Steel (1.2 kg)	Φ28X280 mm, Stainless Steel (1.2 kg)
Counterweight	5kg (11 lbs) X1	5kg (11 lbs) X1	5kg (11 lbs) X1
Motor	Precision stepper motor, 1.8°/128X micro-step	Precision stepper motor, 1.8°/128X micro-step	Precision stepper motor, 1.8°/128X micro-step
Motor resolution	0.08 arcsec (200 PPS)	0.08 arcsec (200 PPS)	0.08 arcsec (200 PPS)
Transmission	Synchronous belt	Synchronous belt	Synchronous belt
Hand Controller	Go2Nova® 8407+, 8 line 21 character LCD	Go2Nova® 8407+, 8 line 21 character LCD	Go2Nova® 8407+, 8 line 21 character LCD
Star Database	212,000+, star identification	212,000+, star identification	212,000+, star identification
Power	DC 12V, 5A (5.5mm/2.1mm plug)	DC 12V, 5A (5.5mm/2.1mm plug)	DC 12V, 5A (5.5mm/2.5mm plug)
AC adapter	100V ~ 240V (included)	100V ~ 240V (included)	100V ~ 240V (included)
Power consumption	0.6A(Tracking), 0.9A(GOTO)	0.6A(Tracking), 0.9A(GOTO)	0.6A(Tracking), 0.9A(GOTO)
Power-down memory	Yes	Yes	Yes
Polar scope	Internal iPolar™ electronic polar scope	Internal iPolar™ electronic polar scope	Internal iPolar™ electronic polar scope
Meridian treatment	Stop (0-20° pass), flip	Stop (0-20° pass), flip	Stop (0-20° pass), flip
Zero position	Automatic zero search	Automatic zero search	Automatic zero search
Dovetail saddle	iOptron Universal Saddle, 5"	iOptron Universal Saddle, 5"	8" Losmandy D & Vixen
Max slew speed	4.5°/sec (1080x)	4.5°/sec (1080x)	4.5°/sec (1080x)
Guiding scope/camera	No	No	Built in guiding scope and camera, iGuider
Guiding port	ST-4 compatible	ST-4 compatible	ST-4 compatible
Communication port	USB	USB	USB
GPS	Yes, external	Yes, external	Yes, external
WiFi	External (optional)	External (optional)	External (optional)
Cable Management	DC12V (3A), ST4,USB	DC12V (3A), ST4,USB	DC12V (3A), ST4,USB

Tripod	LiteRoc 1.75"	LiteRoc 1.75"	LiteRoc 1.75"
Hard case	Optional	Included	Optional
Operation temperature	-10°C ~ 40°C	-10°C ~ 40°C	-10°C ~ 40°C
Test report	PE curve included	PE curve included	PE curve included
Warranty	Two year limited	Two year limited	Two year limited
Price	\$2,008	\$3,008	\$2,498