

	Energica Eva 107	Harley-Davidson Livewire	Zero SR/F	Victory Empulse TT
MSRP	\$21,656 – \$30,443	\$29,799	\$18,995 – \$23,295	\$20,000
Motor Type	Permanent magnet AC, oil cooled	Permanent magnet, water cooled	Interior permanent magnet AC, air-cooled, 900 Amp, 3-phase AC controller	Permanent Magnet AC, Active Liquid cooled
Battery Type	Lithium polymer	Lithium-ion 12.8V, 24 Wh, 120 A	Lithium-ion	Lithium-ion
Battery Capacity	13.4 kWh (max), 11.7 kWh (nominal)	15.5 kWh (max), 13.6 kWh (nominal)	14.4 kWh (max), 12.6 kWh (nominal)	10.3kWh (max), 104Vdc
Power (claimed)	145 hp (107 kW)	105 hp (78 kW)	110 hp (82 kW)	52.4 hp [cycleworld] 42 kW (Peak), 22 kW (Continuous)
Torque (claimed)	148 lb.-ft. (200 Nm)	86 lb-ft. (116 Nm)	140 lb-ft. (190 Nm)	62.6 lb-ft (85Nm) [cycleworld]

Charge Type	On-board 3 kW, J1772 and IEC 62196-2 inlet; level 2 and DCFC compatible	On-board 1400 W SAE J1772 Combo Inlet (CCS1)/IEC 62196 Combo Inlet (CCS2); level 3 DCFC compatible	On-board 3 kW (Premium model: 6 kW), J1772 inlet, level 2 compatible, configurable to 3 kW, 6 kW, 9 kW, or 12 kW	On-board 3kW J1772 Level 2 compatible
On-Board Charge Time	Level 1 (AC wall charger): 8+ hours Level 2: 3.5 hours (0-100% SoC) Level 3 24 kW DCFC: 20 mins (0-85% SoC)	Level 1 (AC wall charger): 12.5 hours Level 2: NA Level 3 DCFC: 40 mins (0-80% SoC), 60 mins (0-100% SoC)	Level 1 (AC wall charger): 8+ hours Level 2: (6 kW) 2 hours (0-95% SoC), (12 kW) 60 mins (0-100% SoC)	Level I 9.5 hours Level II 4.25 hours
Internal Gear Reduction	1.82:1	3.24:1	1.00:1	1.686:1 (Primary)
Final Drive	525 O-Ring Chain (16/44). 2.75 final drive ratio	Belt. 3.00 final drive ratio	Belt. 4.50 final drive ratio	520 O-Ring Chain (14/38) 2.71:1 final drive ratio
Overall Gear Ratio	5.01	9.72	4.50	1st = 2.14:1 2nd= 1.75:1 3rd = 1.45:1 4th = 1.23:1 5th = 1.04:1 6th = 0.95:1
Calculated Motor Torque at Wheel	741.0 lb-ft.	835.9 lb-ft.	630.0 lb-ft.	1- 133 lb-ft 2- 109 lb-ft 3- 90 lb-ft

				4- 77 lb-ft 5- 65.1 lb-ft 6- 59.5 lb-ft
Range (City/Highway/Combined)	Up to 120 miles	146/70/95 (according to MIC standardized test)	161/82/109 (according to SAE J2982 standards)	60 miles mix (HadesOmegaSPEC)
Rider Aids	ABS, traction control (6-level), cruise control, 4 ride modes w/4 regen levels (including off)	Cornering ABS, lean-sensitive traction control, rear-wheel lift mitigation, drag torque slip control, 7 ride modes (4 preset, 3 custom) w/4 regen levels (including off)	Cornering ABS, traction control, drag torque control, 14 ride modes (4 preset, 10 custom)	Econ/Sport modes
Frame	Steel tubular trellis	Modular cast aluminum	Steel tubular trellis	Aluminum Beam
Front Suspension	Marzocchi 43mm, Adjustable Rebound and Compression Damping, Spring Preload (Öhlins available as an upgrade)	Showa 43mm Inverted Separate Function Forks – Big Piston (SFF-BP), fully adjustable, 4.5 inches travel	Showa 43 mm Big Piston Separate Function forks, with adjustable spring preload, compression and rebound damping, 4.72 in travel	Marzocchi 2-way adjustable Forks, 4.7" Fork Travel
Rear Suspension	Bitubo Rear Mono Shock Adjustable Rebound, Spring Preload (Öhlins available as an upgrade)	Showa Balance Free Rear Cushion Lite (BFRC-lite), fully adjustable, 4.5 inches travel	Showa 40 mm piston, piggy-back reservoir shock with adjustable spring preload, compression and	Sachs 2-way Adjustable Shock

			rebound damping, 5.51 in travel	
Front Wheel/Tire	Cast aluminum, 3.5" x 17", Pirelli Diablo Rosso III 120/70 ZR17	Cast aluminum, 3.5" x 17", Michelin Scorcher "Sport" 120/70 ZR17	Cast aluminum, 3.50 x 17, Pirelli Diablo Rosso III 120/70 ZR17	Cast aluminum, 3.5" x 17", Continental Sport Attack 2 120/70 ZR17
Rear Wheel/Tire	Cast Aluminum: 5.5" x 17", Pirelli Diablo Rosso III 180/55 ZR17	Cast Aluminum, 5.5" x 17", Michelin Scorcher "Sport" 180/55 ZR17	Cast aluminum, 5.5" x 17", Pirelli Diablo Rosso III 180/55 ZR17	Cast aluminum, 4.5" x 17", Continental Sport Attack 2 160/60 ZR17
Front Brake	Brembo, 330mm double floating discs, 4-piston radial caliper w/regenerative braking	300mm dual floating rotor, 4-piston monoblock radial-mount; ABS and regenerative braking	Dual 320mm floating discs, J-Juan radial 4-piston calipers, ABS and regenerative braking	Brembo Dual 310mm Floating Rotor / 4-piston Radial Caliper, w/regenerative braking
Rear Brake	Brembo, 240mm Single Disc, 2-Piston Caliper w/Regenerative Braking	260mm floating rotor, dual-piston caliper; ABS and regenerative braking	240mm disc, J-Juan single-piston caliper, ABS and regenerative braking	Brembo Single 220mm Floating Rotor / 2-piston w/Regenerative Braking
Rake/Trail	24.0°/3.9 in.	24.5°/4.3 in.	24.5°/3.7 in.	24.0°/3.8 in.
Wheelbase	58.9 in.	58.7 in.	57.1 in.	58 in.
Seat Height	31.3 in.	30.7 in.	31.0 in.	29.3 in.
Curb Weight	615 lbs	549 lbs	485 lbs (standard)/498 lbs (premium)	470 lbs
Warranty	On vehicle 2 years – on battery 3 years/31,000	Battery: 5 years, unlimited miles	Motorcycle: 2 years Battery: 5	Motorcycle: 2 years & 5 Year Limited

miles

years/unlimited miles

Battery: 5 years,
100,000 miles