

# POLICE AND AUTHORITY MOTORCYCLES



## EFFICIENT. EFFECTIVE. ELECTRIC.

Zero Motorcycles is the next step in police and authority motorcycle evolution. Stealthy, clean and efficient, electric motorcycles provide a new tactical advantage in law enforcement, emergency services and military applications.

With no gears, clutch or noise, Zero motorcycles are easy to operate and improve situational awareness. While in crowds or indoors, the absence of exhaust eliminates ventilation concerns and creates new patrolling scenarios. Over 100 agencies worldwide benefit from having Zero motorcycles in their fleet.

#### ZERO MOTORCYCLES ARE UNIQUELY SUITED FOR

- Patrolling public lands, parks, beaches, trails, running paths
- Event safety and crowd control at concerts, parades, sporting events
- Traffic enforcement in dense urban centers, pedestrian areas and surface streets
- Stealth patrol for drug enforcement, border/perimeter security, college campuses and any situation where silence is an advantage
- Emergency response scenarios where maneuverability and agility are key





#### **REASONS TO RIDE ELECTRIC**

- Economical to operate about a pennyper-mile in "fuel" cost
- Easy to maintain powertrain requires no scheduled maintenance
- Built to last batteries exceed the life of the motorcycle
- Community connection quiet and environmentally conscious

#### **NEW TACTICAL ADVANTAGES**

- No shifting, instant torque from 0 rpm
- Silent idle and stealthy pursuit
- Lightweight, highly maneuverable
- Rapid acceleration up to 102 mph
- Rugged on/off-road versatility

#### **ELIMINATE GASOLINE COMPLICATIONS**

- Reduce noise and exhaust disturbances
- Eliminate gas and oil spills
- Eradicate burn and fire risks
- No tailpipe emissions
- Never stop for gas, "refuel" from any standard outlet

### **GRANTS AVAILABLE**

Grants may be available for both public and private organizations when purchasing electric patrol vehicles.

Grants – and other incentives – can offset some or all of the vehicle purchase price. For additional info, contact

http://www.policegrantshelp.com/

# POLICE AND AUTHORITY MOTORCYCLES





"This motorcycle is so quiet that we continuously sneak up on suspects while out on patrol, and we continue to receive positive feedback from the public."

Officer Steve Carbajal, L.A.P.D. Off-Road Unit (CA)

"It costs us about a dollar a day versus \$15-20 to run a gas-powered motorcycle."

> Lt. Chris Perry, Ceres, CA Police Dept. (CA)

"The ease of use, positive public relations and downright fun have proven invaluable to our department."

Sgt. James D. Fincher, Cobb County Police Department (GA)

"Zero motorcycles are just what we needed: nimble enough for working in crowds, durable enough for tough off-road use."

> Sgt. Adam Vassallo, Traffic Supervisor, Sacramento Police Department (CA)

"They are a delight to operate while giving us expanded patrol options."

Chief Stephen Gahagans, University of Arkansas Police Department (AR)

"We can stay out of sight and still close distance quickly and quietly, which diminishes a suspect's opportunity to flee."

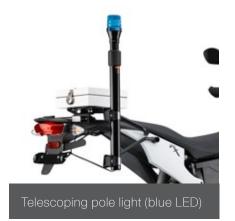
Lt. James Williams, Denver Police Department (CO)

# **CUSTOM BUILT TO YOUR SPECIFICATIONS**





Aux rear LED brake/tail light with license plate holder





MODELS	Zero DSRP	Zero FXP
COLORS		
CAPACITIES	ZF14.4, ZF14.4 +Power Tank	ZF7.2





Model shown: Zero DSRP with available options.

#### STANDARD POLICE PACKAGE

- Whelen® TIR3 Emergency Lights front, side and rear-facing
- Whelen® Siren with PA and Microphone
- Front battery/frame protection bars (drop bars)
- Stealth mode switch headlight, taillight, dash light cut switch
- Locking tank trunk

# AVAILABLE OPTIONS FOR POLICE MODELS

- Power Tank (extends range on Zero DSRP)
- Charge Tank (reduces charge times on Zero DSRP)
- Off-board Quick Chargers (reduce charge times on all models)
- Rear rack, top box, side cases
- 12 V accessory socket kit
- Hand guards
- Aggressive foot pegs
- Rain guard
- Chain kit
- Windscreen
- Telescoping pole light
- LED license plate holder
- Parking brake
- Smartphone mount



# MILITARY / SPECIAL APPLICATIONS

## **COVERT AND CUSTOM**

The Zero MMX is perfectly suited to military applications where silence, low heat signature, lack of exhaust, ease of operation and responsiveness are essential. Using Zero Motorcycles' industry leading Z-Force® powertrain, it features quick swappable power packs, direct drive gearing and an air-cooled motor. With no transmission, powertrain fluids or gas, and weighing only 275 lb, the Zero MMX is easy to transport and maintain.

While designed for military personnel, the Zero MMX is available to civilian agencies for off-road use.









Hand guards

Passenger foot pegs



Aggressive foot pegs



Pirelli Scorpion MT-21 Rallycross tires





MODEL	MMX
COLOR	
CAPACITY	ZF7.2





Model shown: Zero MMX with available options.

### **STANDARD FEATURES**

- Keyed ignition
- Digital dash
- Modular and quick swappable power packs
- Ability to operate in wet conditions with a one-meter submersion capability
- Hand guards
- Tie downs and tow cables
- Aggressive foot pegs
- Chain drive
- Off-board charger
- Off-road tires
- Kickstand

## **AVAILABLE OPTIONS**

- Top rack
- Front frame protection/accessory mounting bars
- Parking brake
- 12V accessory socket
- Passenger foot pegs

# SOPHISTICATED SIMPLICITY

## THEIRS.



## OURS.

Z-Force® motor: elegant, efficient, contains one moving part.

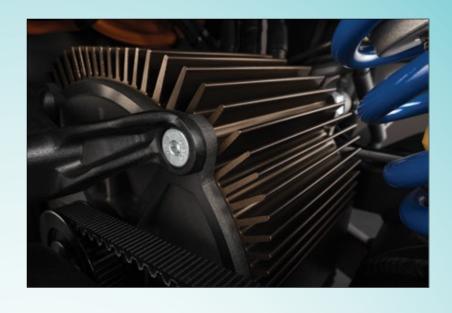




# **Z-FORCE® MOTOR**MASSIVE TORQUE

The Z-Force® motor was designed by Zero Motorcycles in Santa Cruz, California, and engineered for optimum performance, efficiency, size and reliability. With no fluids to maintain and a single moving part, the motor delivers trouble-free performance for the life of the vehicle.

- Up to 116 ft-lb of instant torque and 70 hp
- Smooth, rapid acceleration in all conditions
- Requires no routine maintenance
- Air-cooled with no coolant to change or leak
- Regenerative braking extends range





# **Z-FORCE® POWER PACK**MORE ENERGY

Zero Motorcycles' proprietary battery systems feature the highest energy and power density in the electric vehicle industry, providing the longest range of any production electric motorcycle. Advanced Li-lon cell chemistry and battery management systems ensure a maintenance-free lifetime of service.

- Power packs on police models are backed by a five-year, unlimited mileage warranty (one year on Zero MMX, restrictions apply)
- Cells last 2,500 full charge cycles and retain greater than 80% capacity
- Robust, weatherproof batteries are reliable, even in harsh conditions
- Advanced battery management system with enhanced 24/7 cell monitoring
- Available Power Tank extends range on Zero DSRP

# ZERO'S MOBILE APP GET CONNECTED

Customizing performance and managing your fleet of motorcycles is made easy with the free Zero Motorcycles mobile app. While riding, the app provides real-time data and serve as a supplemental dash display. While parked, with the app you can:

- Customize top speed, max torque and regenerative braking
- See detailed analysis of battery and charging status
- View data on energy use, "fuel" economy and cost savings
- Send diagnostic information to Zero Motorcycles
- Save time and money by updating vehicle firmware



	ZERO DSRP ZF14.4	ZERO DSRP ZF14.4 +POWER TANK
RANGE*		
City	157 miles (253 km)	196 miles (315 km)
Highway, 55 mph (89 km/h)	88 miles (142 km)	110 miles (177 km)
» Combined	112 miles (180 km)	141 miles (227 km)
Highway, 70 mph (113 km/h)	64 miles (103 km)	80 miles (129 km)
» Combined	91 miles (146 km)	114 miles (183 km)
MOTOR	or miss (1 to tun)	1111111100 (100 1011)
Peak torque	116 ft-lb (157 Nm)	116 ft-lb (157 Nm)
Peak power	70 hp (52 kW) @ 3,500 rpm	70 hp (52 kW) @ 3,500 rpm
Top speed (max)	102 mph (164 km/h)	102 mph (164 km/h)
Top speed (sustained)	90 mph (145 km/h)	90 mph (145 km/h)
Туре		dial flux, interior permanent hi-temp magnet, brushless motor
Controller		nless controller with regenerative deceleration
POWER SYSTEM	riigh emciency, 773 amp, 5-phase brush	iless controller with regenerative deceleration
Power pack	Z-Force® Li-Ion intelligent integrated	Z-Force® Li-lon intelligent integrated
'		
Max capacity  Nominal capacity	14.4 kWh 12.6 kWh	18.0 kWh
Nominal capacity Charger type	1.3 kW, integrated	1.3 kW, integrated
		7 0
Charge time (standard)	9.8 hours (100% charged) / 9.3 hours (95% charged)	12.1 hours (100% charged) / 11.6 hours (95% charged)
» With Charge Tank option	2.5 hours (100% charged) / 2.0 hours (95% charged)	N/A
Charge Tank option charging Speed	75 miles per hour (120 kilometers per hour)	N/A
With Charge Tank option + onboard	2.1 hours (100% charged) / 1.6 hours (95% charged)	N/A
6kW Charge-Tank + OE Onboard Charging Speed (City, 0 to 95%)	91 miles per hour (146 kilometers per hour)	N/A
» With one accessory charger	5.7 hours (100% charged) / 5.2 hours (95% charged)	7.0 hours (100% charged) / 6.5 hours (95% charged)
» With max accessory chargers	2.8 hours (100% charged) / 2.3 hours (95% charged)	3.3 hours (100% charged) / 2.8 hours (95% charged)
Input	Standard 110 V or 220 V	Standard 110 V or 220 V
DRIVETRAIN		
Transmission	Clutchless direct drive	Clutchless direct drive
Final drive	90T / 20T, Poly Chain® HTD® Carbon™ belt	90T / 20T, Poly Chain® HTD® Carbon™ belt
CHASSIS / SUSPENSION / BRAK	ES	
Front suspension	Showa 41 mm inverted cartridge forks, with adjusta	ble spring preload, compression and rebound damping
Rear suspension	Showa 40 mm piston, piggy-back reservoir shock with ac	djustable spring preload, compression and rebound damping
Front suspension travel	7.00 in (178 mm)	7.00 in (178 mm)
Rear suspension travel	7.03 in (179 mm)	7.03 in (179 mm)
Front brakes	Bosch Gen 9 ABS, J-Juan asymmetric of	dual piston floating caliper, 320 x 5 mm disc
Rear brakes	Bosch Gen 9 ABS, J-Juan single pi	iston floating caliper, 240 x 4.5 mm disc
Front tire	Pirelli MT-60 100/90-19	Pirelli MT-60 100/90-19
Rear tire	Pirelli MT-60 130/80-17	Pirelli MT-60 130/80-17
Front wheel	2.50 x 19	2.50 x 19
Rear wheel	3.50 x 17	3.50 x 17
DIMENSIONS		1
Wheelbase	56.2 in (1,427 mm)	56.2 in (1,427 mm)
Seat height	33.2 in (843 mm)	33.2 in (843 mm)
Rake	26.5°	26.5°
Trail	4.6 in (117 mm)	4.6 in (117 mm)
WEIGHT		(1117 11111)
Curb weight	443 lb (201 kg)	487 lb (221 kg)
Cara Worgin	332 lb (151 kg)	288 lb (131 kg)
Carrying canacity	TANK INTERIOR	200 10 (101 109)
ECONOMY		410 MPGo (0.56 I/100 km)
Carrying capacity  ECONOMY  Equivalent fuel economy (city)  Equivalent fuel economy (highway)	419 MPGe (0.56 I/100 km) 172 MPGe (1.37 I/100 km)	419 MPGe (0.56 I/100 km) 172 MPGe (1.37 I/100 km)





<sup>\*</sup>Range and top speed vary based on riding style and drivetrain configuration.

	ZERO FXP ZF7.2
RANGE*	ZENO FAF ZF1.2
City	88 miles (142 km)
Highway, 55 mph (89 km/h)	51 miles (82 km)
» Combined	65 miles (105 km)
Highway, 70 mph (113 km/h)	32 miles (51 km)
» Combined	47 miles (76 km)
MOTOR	HI TIMES (TO KIT)
Peak torque	78 ft-lb (106 Nm)
Peak power	46 hp (34 kW) @ 4,300 rpm
Top speed (max)	85 mph (137 km/h)
Top speed (max)  Top speed (sustained)	70 mph (113 km/h)
Type Controller	Z-Force® 75-5 passively air-cooled, high efficiency, radial flux, interior permanent magnet, brushless motor  High efficiency, 550 amp, 3-phase brushless controller with regenerative deceleration
POWER SYSTEM	nigh eniciency, 550 amp, 5-phase brushless controller with regenerative deceleration
Power pack	Z-Force® Li-lon intelligent integrated
Max capacity	7.2 kWh
Nominal capacity	6.3 kWh
Charger type	
	650 W, integrated
Charge time (standard)	9.7 hours (100% charged) / 9.2 hours (95% charged)
» With one accessory charger	4.1 hours (100% charged) / 3.6 hours (95% charged)
» With max accessory chargers	1.8 hours (100% charged) / 1.3 hours (95% charged)
Input	Standard 110 V or 220 V
DRIVETRAIN	
Transmission	Clutchless direct drive
Final drive	90T / 18T, Poly Chain® HTD® Carbon™ belt
CHASSIS / SUSPENSION / BRAK	
Front suspension	Showa 41 mm inverted cartridge forks, with adjustable spring preload, compression and rebound damping
Rear suspension	Showa 40 mm piston, piggy-back reservoir shock with adjustable spring preload, compression and rebound damping
Front suspension travel	8.60 in (218 mm)
Rear suspension travel	8.94 in (227 mm)
Front brakes	Bosch Gen 9 ABS, J-Juan dual piston floating caliper, 240 x 4.5 mm disc
Rear brakes	Bosch Gen 9 ABS, J-Juan single piston floating caliper, 240 x 4.5 mm disc
Front tire	Pirelli Scorpion MT 90 A/T 90/90-21
Rear tire	Pirelli Scorpion MT 90 A/T 120/80-18
Front wheel	1.85 x 21
Rear wheel	2.50 x 18
DIMENSIONS	
Wheelbase	56.6 in (1,438 mm)
Seat height	34.7 in (881 mm)
Rake	25.4°
Trail	4.1 in (104 mm)
WEIGHT	000    (407   )
Curb weight	302 lb (137 kg)
Carrying capacity	328 lb (149 kg)
ECONOMY	
Equivalent fuel economy (city)	468 MPGe (0.50 I/100 km)
Equivalent fuel economy (highway)	172 MPGe (1.37 I/100 km)
Typical cost to recharge	\$0.81



	ZERO MMX ZF7.2
RANGE*	ZERO WIMA ZF1.2
-	70 miles (407 lum)
City	79 miles (127 km)
Recon riding	65-175 minutes
Aggressive tactical riding	45-155 minutes
MOTOR	
Peak torque	78 ft-lb (106 Nm)
Peak power	46 hp (34 kW) @ 4,300 rpm
Top speed (max)	85 mph (137 km/h)
Top speed (sustained)	70 mph (113 km/h)
Туре	Z-Force® 75-5 passively air-cooled, high efficiency, radial flux, interior permanent magnet, brushless motor
Controller	High efficiency, 550 amp, 3-phase brushless controller with regenerative deceleration
POWER SYSTEM	
Power pack	Z-Force® Li-lon intelligent modular
Max capacity	7.2 kWh
Nominal capacity	6.3 kWh
Charger type	1 kW, standalone
Charge time (standard)	6.0 hours (100% charged) / 6.5 hours (95% charged)
» With one accessory charger	3.5 hours (100% charged) / 3.0 hours (95% charged)
» With max accessory chargers	2.0 hours (100% charged) / 1.5 hours (95% charged)
Input	Standard 110 V or 220 V
DRIVETRAIN	Standard 110 V OI 220 V
Transmission	Clutchless direct drive
Final drive	65T / 12T, 520 chain
CHASSIS / SUSPENSION / BRAK	
Front suspension	Showa 41 mm inverted cartridge forks, with adjustable spring preload, compression and rebound damping
Rear suspension	Showa 40 mm piston, piggy-back reservoir shock with adjustable spring preload, compression and rebound damping
Front suspension travel	8.60 in (218 mm)
Rear suspension travel	8.94 in (227 mm)
Front brakes	J-Juan dual piston floating caliper, 240 x 4.5 mm disc
Rear brakes	J-Juan single piston floating caliper, 240 x 4.5 mm disc
Front tire	Pirelli MT-21 Rallycross 90/90-21
Rear tire	Pirelli MT-21 Rallycross 120/80-18
Front wheel	1.85 x 21
Rear wheel	2.50 x 18
DIMENSIONS	
Wheelbase	56.6 in (1,438 mm)
Seat height	34.7 in (881 mm)
Rake	25.4°
Trail	4.1 in (104 mm)
WEIGHT	
Curb weight	275 lb (125 kg)
Carrying capacity	355 lb (161 kg)
ECONOMY	
Equivalent fuel economy (city)	420 MPGe (0.56 I/100 km)
Typical cost to recharge	\$0.81
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<sup>\*</sup>Range and top speed vary based on riding style and drivetrain configuration.





380 El Pueblo Road Scotts Valley, CA 95066 United States

## www.zeromotorcycles.com/fleet/

FleetSales@zeromotorcycles.com Toll Free: 888-786-9376 Direct: (831) 438-3500

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