



Electric Propulsion Controls and Accessories

## American Traction Systems Transit Propulsion Systems and Products

### ATS Transit

ATS Transit propulsion systems and accessories are available for third rail, overhead line, diesel electric and battery systems. Standard products are installed on streetcar, monorail, light rail and subway systems throughout North America. Our products are compatible with all modern and legacy subsystems required for the operation, control and monitoring of public transit vehicles.

Our standard products include Low Voltage Power Supplies, Auxiliary Power Units, Battery Chargers, Air Compressor and Motor Blower VFDs.

### Transit Propulsion Systems

DC/DC, DC/AC, AC/AC and AC/DC power conversion products include:

- Traction motor controls
- House power converters
- Blower inverters
- Battery chargers
- Air compressor controllers
- Main rectifiers
- Complete high and low voltage cabinet design, testing, and fabrication
- Vehicle diagnostics
- CAN-Bus or MVB (Multifunction Vehicle Bus) Communications
- System upgrades, recertification or total redesign
- Other engineering services for a fully integrated electrical system

### Transit Propulsion Systems

ATS Transit duty products are high performance IGBT (Insulated Gate Bipolar Transistor) drives designed to meet the reliability demands of public transportation systems. With over 50 streetcar propulsion systems in daily operation and hundreds of VFDs and DC supplies for auxiliary systems, ATS has a proven reliability track record with major transit systems in North America.

All ATS products are built at our ISO certified facility in Fort Myers, Florida.



Specifications					
Description (Part #)	Purpose	Rated Power @ Rated Volts		Voltage Range**	
		Out	In	Out	
DC/DC	Streetcar DC Propulsion System	Vintage Streetcar modernization	Dual 45kW	450 - 750V	0 - Input
	Low Voltage Power Supply	Light Rail Streetcar Monorail	8kW	450 - 750V	38V DC 180A
	Regen Protection Module	Light Rail Streetcar Monorail	120kW @ 750V	256 - 800V	Adjustable 272 - 768V
	Dynamic Brake Chopper	Light Rail Streetcar Monorail	1495kW	600 - 750V	0 - Input
	Dual Buck/ Boost Battery Charger	Hybrid or Battery systems	2x 200kW @ 500V	360 - 800V	360 - 800V
	IGBT Fault Interrupter	Battery systems	375kW	0 - 1100V DC	0 - Input
DC/AC	AC Propulsion System	Light Rail Streetcar Monorail	2x 149kW (2x 200HP)	450 - 750V	0 - 0.7 x DC Input
	Buck Inverter DC/AC Aux Inverter	Light Rail Streetcar Monorail	45kW	450 - 750V	230RMS
	Mini-VFD (A300505)	For blowers, compressors, evaporators, and air handlers	2.6kVA @ 415V	450 - 900V	0 - 525V
	Aux VFD (A510008)	For induction motors operating air compressors	8.6kVA @ 380V AC	450 - 750V	(0 - 0.7) x V Input
AC/DC	Rectifier	Light Rail Streetcar Monorail	960kW	750V nominal	1000V
AC/AC	AC/AC Aux Inverter	Light Rail Streetcar Monorail	45kW	220V AC or 440V AC	0 - Input

\*\*Contact sales rep for additional voltages



Mini-VFD mounted on blower motor for light rail



DC Motor Streetcar Controller System



Buck Inverter mounted on monorail



Dual DC Motor Streetcar Controller System



Electric Propulsion Controls and Accessories

Light Rail

American Traction Systems has designed numerous components for streetcars and trolley buses, from propulsion systems used on the New Orleans Canal Streetcars and the recent El Paso streetcar renovations, to the power inverter/air compressor VFD unit designed for Niagara Frontier Transportation Authority. Our latest product is the low voltage power supply self powered from a HVDC input.



Mini-VFD for Traction Motor Blowers



Low Voltage DC/DC Power Supply



Power Inverter for Air Compressors

Hybrid

ATS offers several electric vehicle inverters including a DC to AC propulsion system for battery powered and series hybrid vehicles, a high power inverter for propulsion or generator applications, and a high power inverter system that includes an AC induction motor controller, an auxiliary inverter and a built in dump chopper for regen protection. These units have been installed on airline FBO equipment, military vehicles, and electric trucks. Our propulsion system has been on the Ohio State Buckeye Bullet electric vehicles setting numerous land speed records.



Electric Vehicle Inverter



High Power Inverter



High Power Inverter with Auxiliary Inverter and Regen Protection

Rail

ATS designs and manufactures high efficiency locomotive propulsion systems and accessories for new or remanufactured locomotives using AC or DC traction motors, with more than 175 locomotive propulsion systems delivered since 2008.

Systems are running on the Railserve LEAF switching locomotives, the Brookville Co-Gen locomotives, as well as on several in Africa for Grindrod. We also installed the first battery system on a locomotive for Norfolk Southern. We have worked with Loram for many years placing systems on MOW locomotives in Germany, United Kingdom and the U.S.



Propulsion Rack Assembly



Complete Traction Lockers



Installation on locomotive

Custom

ATS has a modern, full service panel shop. We can provide the design, assembly, and testing of custom electrical control panels. We have experience with Programmable Logic Controllers (PLCs) with integrated touch screen, operator stations, VFD controls, DC drives, switchgear and medium voltage cabinets.

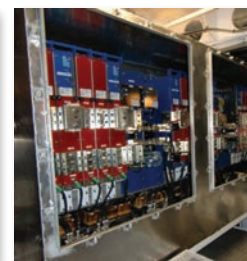
We have five independent test bays powered from a dedicated 480V AC 1000A supply providing regulated AC and DC supplies for full load testing of all panels.



Stationary custom panel work



AC and DC Locomotive Traction Lockers



On-site panel work on marine vessel

About American Traction Systems



American Traction Systems is celebrating 13 years of providing power solutions to a variety of industries. We expanded the technology developed for underground mining vehicles by our sister company, Saminco International (established in 1992), and applied it to above ground applications where we have continued to develop our product line to new industries and services.

We specialize in the design and manufacture of high power AC, DC, and Permanent Magnet Motor Control products primarily for traction and propulsion applications. Our solid state electric vehicle traction controllers are powered by batteries, diesel-electric, fuel cells or power centers for electric vehicles of all types. While standard manufacturing is our mainstay, constant research and development keeps ATS at the forefront.

We are based in Fort Myers, FL with on-premise departments including board design, software and hardware engineering design, CAD, manufacturing, panel wiring, testing and quality control.

Our customers span the globe from North and South America, to Europe, Africa, Asia, and Australia. We have factory trained technicians in North America, Europe, South Africa and Asia.

