



VF SERIES BATTERY VFD* SYSTEMS

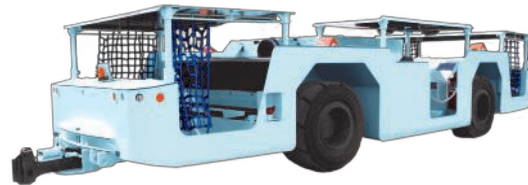
AVAILABLE IN 128V-240V

FOR 10 TON LOCOMOTIVE, MONORAIL AND
RUBBER TIRE MAN CARRIERS

*VARIABLE FREQUENCY DRIVE



Railrunner / Mining Locomotive

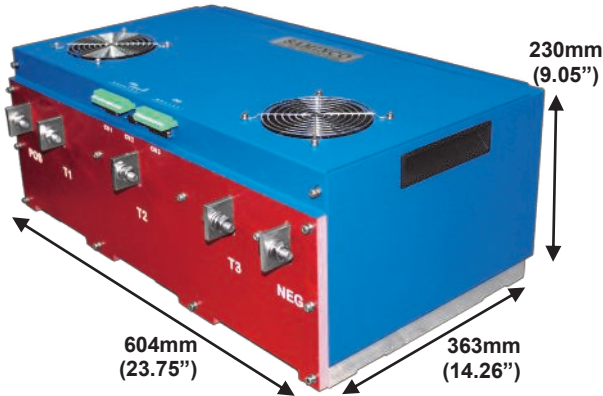


Rubber Tire Man Carriers

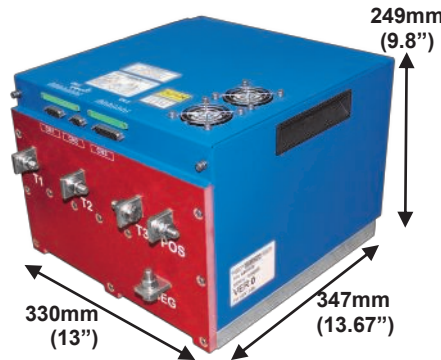
See videos of our products in operation at www.samincoinc.com

MODULE SPECIFICATIONS

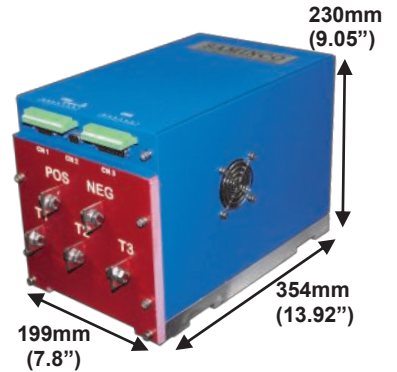
Tram Drive
(for large motors)
VF -1200 series



Tram Drive
(for medium motors)
VF -700 series



Pump Drive
VF -400 series



Specifications	Part Name	System Description	Rated Power				
			Power @ Rated Volts	Frequency Range	Voltage Range	Amps @ Rated Power	
Tram Drive (for large motors)	VF1-1200	128V	INPUT	62kW @ 128VDC	DC	100 - 150VDC	485A
			OUTPUT	58kW @ 80VAC	0 - 125Hz	0 - 100VAC	495A / 1200A peak
	VF2-1200	240V	INPUT	105kW @ 240V	DC	160 - 300V	440A
			OUTPUT	100kW @ 138V	0-125Hz	0 - 170V	500A / 1200A peak
Tram Drive (for medium motors)	VF1-700	128V	INPUT	30kW @ 128VDC	DC	100 - 150VDC	235A
			OUTPUT	39kW @ 80VAC	0 - 120Hz	0 to V in x 0.7	285A / 700A peak
	VF2-700	240V	INPUT	70kW @ 240V	DC	160 - 300V	290A
			OUTPUT	68kVA @ 138V	0-125Hz	0 to V in x 0.7	285A / 700A peak
Pump Drive	VF1-400	128V	INPUT	23kW	DC	100 - 150VDC	180A
			OUTPUT	21kW @ 70VAC	0 - 125Hz	0 - 100VAC	200A / 400A peak
	VF2-400	240V	INPUT	43kW @ 240V	DC	160 - 300V	180A
			OUTPUT	41kW @ 138V	0-125Hz	0 - 170V	200A / 400A peak

BENEFITS

THE BATTERY / AC VFD SYSTEM

- Easily retrofitted into current equipment
- Failsafe— motor rotation will stop if drive fails
- Low maintenance with AC motor
- No need to replace batteries: will work with lead-acid batteries as well as new battery technology

WITH TURBO TORQUE™ TRACTION DRIVE

- Better stall torque and higher top speed than the equivalent 36kW (50HP) DC drive
- Speed governor
- Effective Regenerative braking; minimizes the use of mechanical brakes

WITH WHISPER PUMP™ ON-DEMAND HYDRAULIC PUMP DRIVE

- Reduced noise in pump idle mode, from 80 to 70 decibels
- Significant battery energy reduction during idle
- Smoother steering at pump idle

BATTERY MANAGEMENT SYSTEM

- Able to monitor battery levels from display
- "Low Battery" warning
 - Automatic slow down of some functions
 - Torque retained, speed reduced to conserve energy
 - Enables vehicle limited time to return to power center for recharging

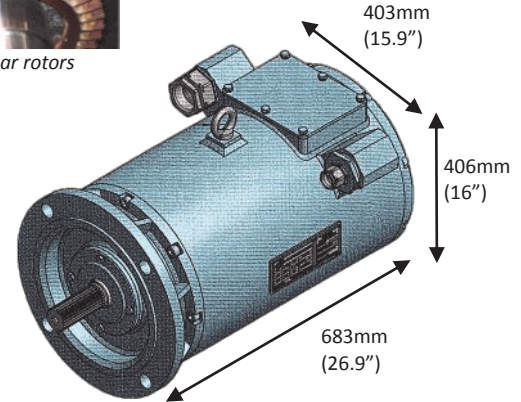
AC MOTOR


Saminco Part #: M6005-021

- Robust all steel "mine-duty" round barrel construction
- Rotors are a copper alloy fabricated design for high efficiency, less slip and lower rotor losses (compared to equivalent aluminum die-cast rotors)
- Saminco encoder has 120° thermal rating
- Motor has flexibility to adapt to individual load requirements

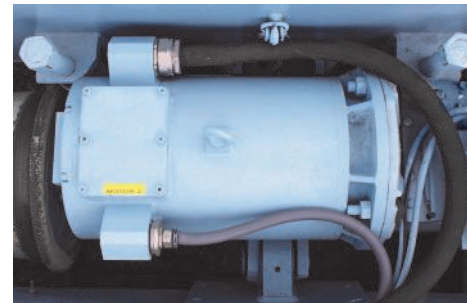


Copper bar rotors



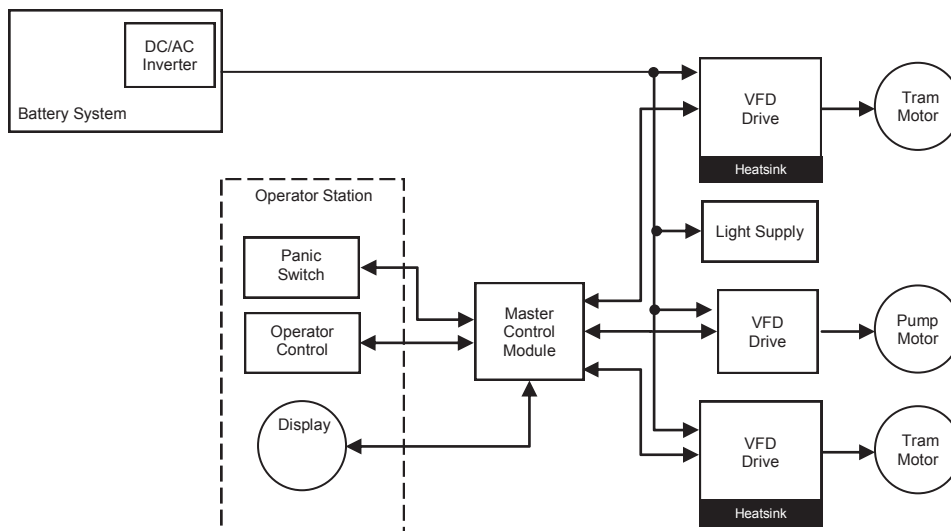
POWER		VOLTAGE	PHASE	FREQUENCY	MODEL NUMBER
15		80 / 140	3	50	
CURRENT	RPM	DUTY	FRAME	SERIAL NUMBER	
159/92	974	S4	31280 Aa		
Max. TEMP.	INS.	ENCLOSURE		ENCODER	
100°C	F	T.E. - NON VENTILATED - IP		44128 PPR	
MADE IN RSA BY TVE ELECTRIC MOTORS 					
31746					

Motor Plate



Sample motor setup

SAMPLE BLOCK DIAGRAM



**OPTIONS* FOR THE
BATTERY / AC VFD SYSTEMS**

Part Name	Description	SAMINCO Part Number
VF1-1200	128VDC Variable Frequency Drive precharge / tram	A800682
VF1-700	120VDC 300A Variable Frequency Drive	A801018
VF1-400	128VDC Variable Frequency Drive precharge / pump	A800679
VFD Master Control Module	128V VFD Master Control Module	A800468
VF2-1200	240VDC Variable Frequency Drive precharge / tram	A800782
VH2-700	240VDC 300A Variable Frequency Drive	A801019
VF2-400	240VDC Variable Frequency Drive precharge / pump	A800781
VFD Master Control Module	240V VFD Master Control Module	A800368
Parts Available for all systems		
LU300b	12VDC 300W Light Supply, 90V to 360VDC input	A800966
Diagnostic Display	With programming port - aluminum enclosure	A800348
Diagnostic Display	With programming port - steel enclosure	A800406
DCCT	1000A HALL EFFECT + - 15V	T9003-018
Joystick	MSHA Approved	A800072
Cable 4CON	22AWG 30 ft, Diagnostic out xp box	W6004-181
Cable 25CON	25CON Sub-D 72	W6004-184
DCCT Cable	DCCT Cable for BDI	W6004-188
Motors and Encoders		
Tram Motor	15kW 20HP 3Phase 50Hz 80 - 140V AC	M6005-021
Motor Encoder Assembly	Contains encoder and wheel	M6006-020
Encoder Backplate	Universal backplate	M6006-022
Encoder	Encoder sensor	M6006-023

*Partial list shown. See your sales representative for all available options and configurations.



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