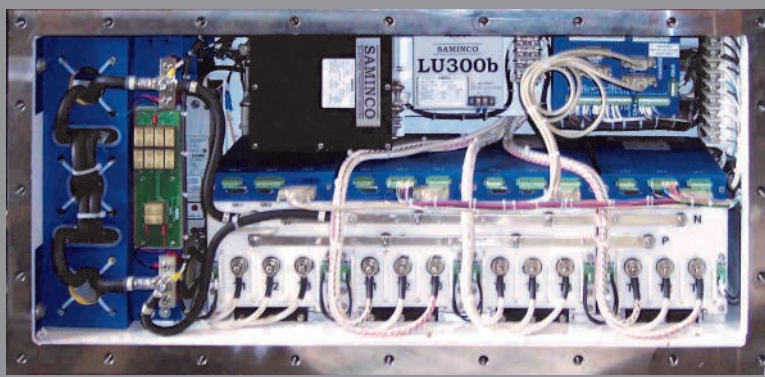




SAMINCO
international



**550VDC DC/AC VFD* SYSTEM
FOR SHUTTLE CARS**

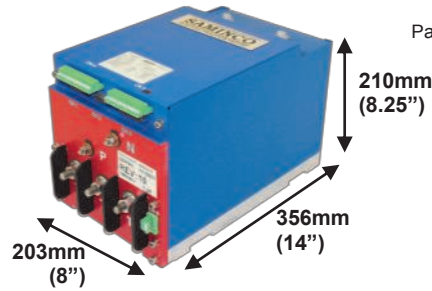
*VARIABLE FREQUENCY DRIVE



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

VF1-75R TRAM AND CONVEYOR DRIVE

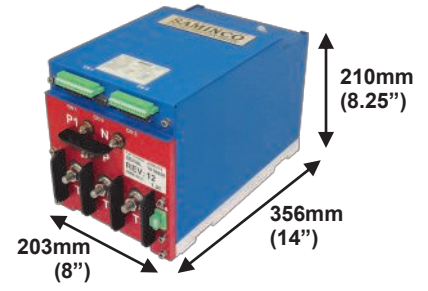
Part #: A800374



- Regenerative Drive
- PWM Flux Vector inverter using the latest NPT (non-punch through) IGBT technology
- Flux Vector torque control provides differential traction control for superb cornering
- Rugged, short circuit proof power circuit provides excellent long term reliability
- Multiple control options: standard analog foot switch, radio remote control, operator station
- Proximity ready

PRECHARGE / PUMP START INVERTER

Part #: A800376



Dual Function:

- Soft charge of 550VDC power Bus DC Bus by-pass contactor
- Pump motor soft start inverter 25kW @ 460VAC programmable pump motor current limit setting

Specifications	Tram / Conveyor Drive		Pump Drive	
	Rectified Input (DC)	Output (AC)	Rectified Input (DC)	Output (AC)
Rated Power @Rated Volts	72kW @ 550V	75kVA @ 440V	98kW @ 550V	39kVA @ 460V
Frequency range	DC	0 - 125Hz	DC	0-125Hz
Voltage Range	500V - 750V	0 - 525V	500 - 750V	0 - 525VV
Amps @ Rated Power	110A	100A(250A peak)	150A	50A (125A peak)

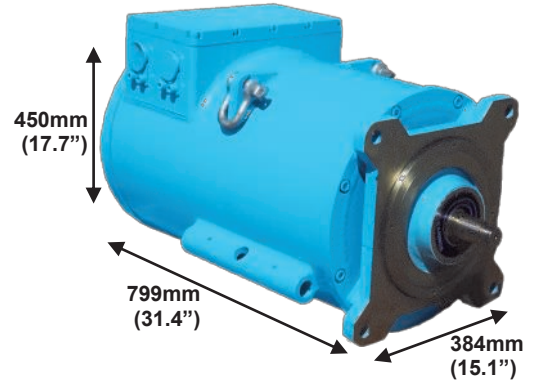
- Robust all steel “mine-duty” round barrel construction
- Low-loss copper-barred rotors are a copper alloy fabricated design for high efficiency, less slip and lower rotor losses (compared to equivalent aluminum die-cast rotors)
- Saminco encoder has 120° thermal rating
- Motor has flexibility to adapt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

	XV55 Torque Tram Motor	XV25 Conveyor Motor
Saminco Part #	M6005-010	M6005-020
Power	-	26kW
Peak Torque	1000Nm	-
Voltage	440VAC	460VAC
Frequency (Hz)	50	60
Phase	3	3
Poles	4	4
Current (AMPS)	93A	50A
RPM	1478 (CPI)	1720
Duty	1 hour	1 hour
Enclosure	TEXP	TEXP
Insulation	H	H
Mounting	Flange	Flange
Max Temp	120°C	120°C
Weight	635kg (1400 lbs.)	377kg (831 lbs.)
MSHA ASSY #	15190C	13920 F
MSHA Approval #	07-JA050005-0	07-JA060014-0

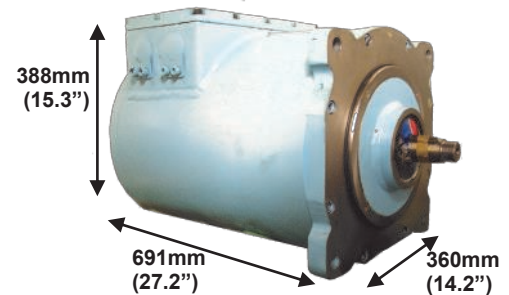


Pictured: Copper bar rotors

XV55 - 1000Nm XP TORQUE TRAM MOTOR



XV25 - 26kW 440VAC XP CONVEYOR MOTOR



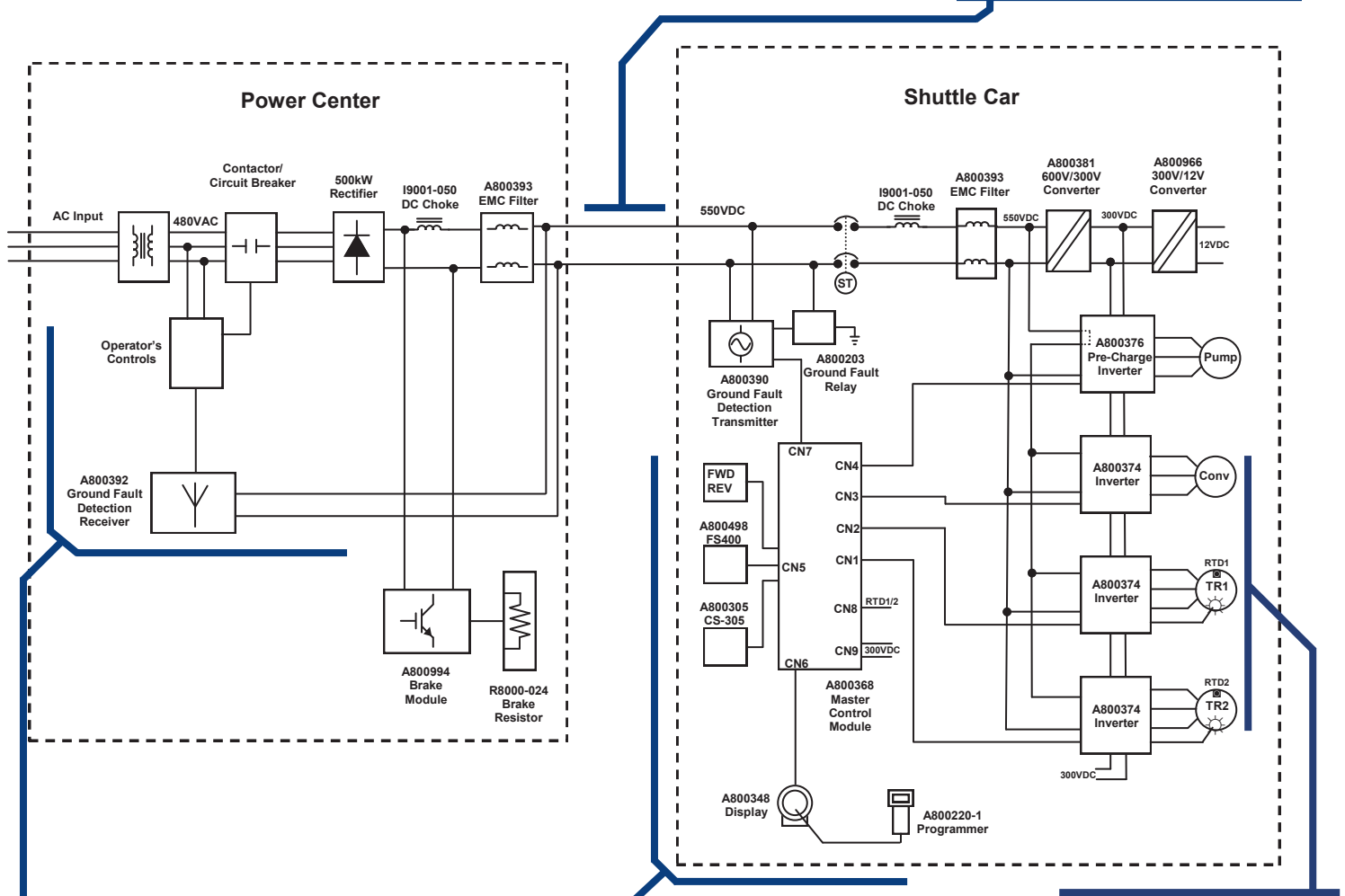
See your Saminco representative for additional tram motor sizes and for pump motors.

Performance Advantages

Load Sharing Tram Motors
 Smooth and Reliable Electrical Braking
 Variable Speed / Reversible Conveyor Control
 Approximately two times more power can be delivered to the Shuttle Car via the 550VDC Cable

DC cable more reliable
 Can get more cable on the reel
 DC cable quicker/easier to troubleshoot and repair
 Longer lengths allowed by MSHA – 850 feet of #2/0 is common
 Less Trailing Cable heat - up to 75 percent less heat than 250VDC Trailing Cables

Trailing Cable Advantages



Safety Advantages

Detects Trailing Cable Faults
 No live open wires on ground with cut cable
 Motor and Drive Ground Faults detected immediately
 Power center *instantly* shuts down in case of cable break

AC Motor Advantages

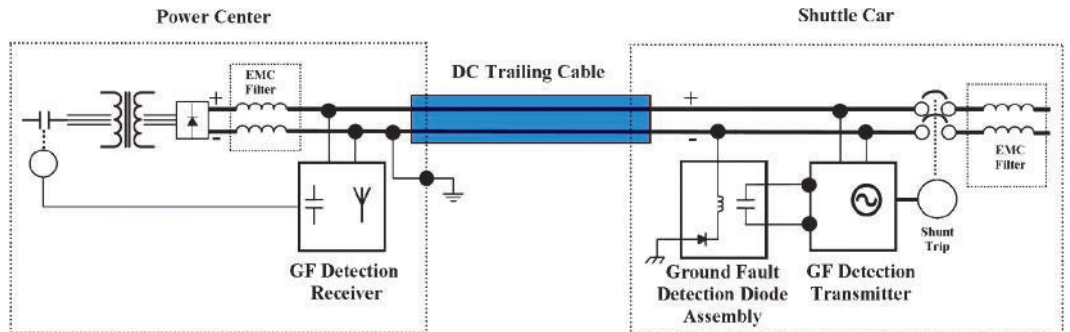
Substantial increase in torque as compared to competitive motor
 RTD's in windings to monitor motor temperature
 Fabricated Copper Rotor
 No Brushes

Shuttle Car Controller Advantages

Less heat in XP box
 No front end losses
 System Programming via port in display - no need to open XP Enclosure

GROUND FAULT AND CABLE BREAK DETECTION SYSTEM

- Only system that removes high voltage from DC trailing cable
- Instantly detects cable break- no exposed live conductors on mine floor
- Detects ground fault condition at the shuttle car, power center and trailing cable
- Grounding diode/relay assembly for negative ground DC shuttle cars
- Sensing current 15A DC maximum
- If vehicle shunt trip/circuit breaker does not clear the ground fault, the power center will be shut down



OPTIONS* FOR THE DC/AC VFD SHUTTLE CAR SYSTEM

Part Name	Description	SAMINCO Part Number
VF1-75 Motor Controller	75kW 480VAC traction and conveyor drives	A800374
Pre-Charge / Pump Start Inverter	VFD precharge / pump	A800376
Down Chopper	600VDC to 300VDC Down Chopper	A800381
VFD Master Control Module	Master Control Module	A800368
LU300b	12VDC 300W Light Supply, 90V to 360VDC input	A800966
Diagnostic Display	With programming port- aluminum enclosure	A800348
Diagnostic Display	With programming port- stainless steel enclosure	A800406
Handheld Programmer	Allows setting and viewing of system parameters and logs	A800220-1
Foot Switch	FS-400 foot switch assembly	A800498
Conveyor Switch	CS305 Controls forward/ reverse operation, precise speed control of conveyor chain, 13 position detent	A800305
Conveyor Switch	CS300 Controls forward/ reverse operation	A800300
Panic Switch	PS300 Panic Switch	A800190
DC Choke	.5mh, 150AMP, NOMEX insulation, U Barrier Guards	I9001-050
EMC Filter	170A @ 550VDC, 100kW @ 550VDC	A800393
Ground Fault Diode/ Relay	200V- 750VDC, sensing current: 15A max	A800203
Ground Fault Detector	Monitors ground fault relay and trailing cable	A800390
Power Center Components		
EMC Filter	170A @ 550VDC, 100kW @ 550VDC	A800393
Ground Fault Receiver	Input supply: 120VAC	A800392
DC Choke	.5mh, 150AMP, NOMEX insulation, U barrier guards	I9001-050
Brake Resistor	VFD brake resistor assembly, 2.8 Ohms 7000W	R8000-024
Brake Module Panel Assembly	Adjustable brake voltage (includes A800993)	A800994
BM601 Brake Module Only	256V to 800V DC selectable	A800993
Motors and Encoders		
Tram Motor	XV55 - 1000Nm XP torque tram motor	M6005-010
Conveyor Motor	XV25 - 26kW 440VAC XP conveyor motor	M6005-020
Motor Encoder Assembly	Contains encoder and wheel	M6006-020
Encoder Backplate	Universal backplate	M6006-022
Encoder	Encoder sensor	M6006-023

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

Visit our website at www.samincoinc.com or email us at sales@samincoinc.com


FLORIDA
Headquarters

 10030 Amberwood Rd.
 Fort Myers, FL 33913

PH: 239-561-1561

FAX: 239-561-1502

WEST VIRGINIA
Service Branch

 517 Virginia Ave.
 Huntington, WV 25701

PH: 304-523-4700

FAX: 304-523-4039

COLORADO
Service Branch

 Cedaredge, CO
 PH: 940-623-0000

SOUTH CAROLINA
Service Branch

 Anderson, SC
 PH: 304-654-9054

INTERNATIONAL LOCATIONS:
Boksburg, South Africa PH: +11 397 6026

Australia PH: +86 15140090694

China PH: +61 2 9899 6857

Poland