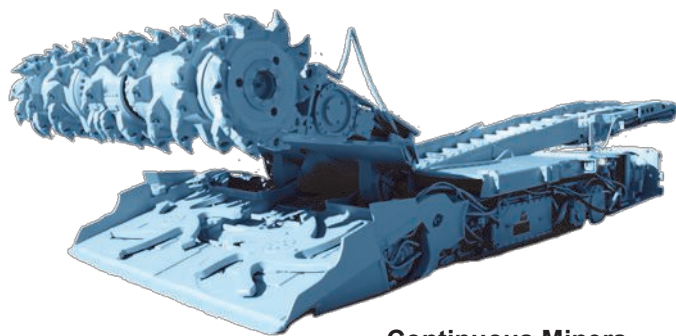




COOL-TORQUE™ MOTORS

CONTINUOUS MINERS AND SHUTTLE CARS
USING THE JR1000 SYSTEM

*VARIABLE FREQUENCY DRIVE



Continuous Miners



Shuttle Cars

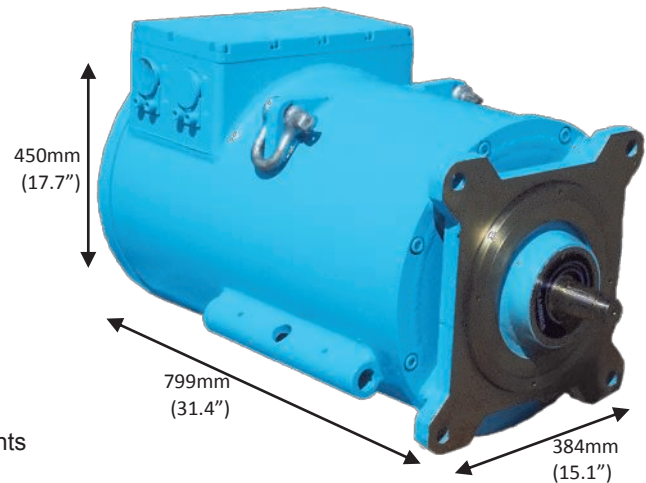
MSHA CERTIFIED

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

TM1000 COOL-TORQUE™ MOTOR FOR SHUTTLE CARS (AIR COOLED)

Saminco part number: M6005-034

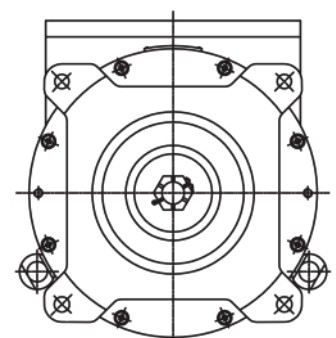
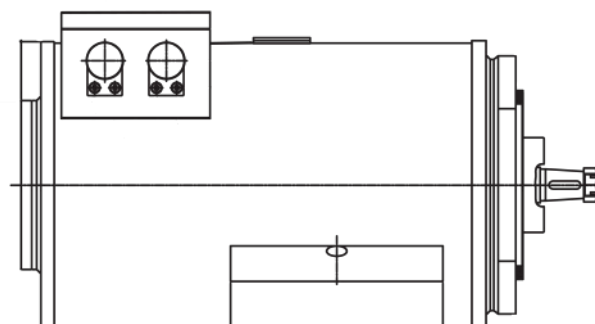
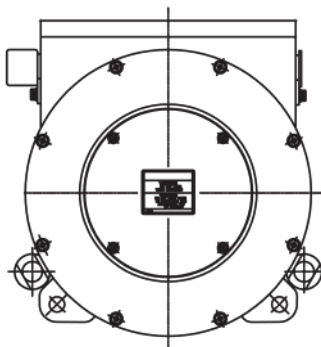
Shuttle Car Traction Motor
 Air Cooled
Model: TM1000
1000Nm stall torque



- Robust all steel “mine-duty” round barrel construction
- Absence of bushes greatly reduces motor maintenance
- Motor has flexibility to adapt to individual load requirements
- Can replace original OEM's motor without any mounting modification
- Torque and speed-sharing between motors with greater starting torque.
- Proximity detection ready for reliable stopping and creep speed control.

SAMINCO				TORQUE MOTOR FOR CONVERTER SUPPLY			
				MODEL NUMBER : TM 1000		SERIAL NUMBER :	
ELECTRIC TRACTION DRIVES				CONVERTER TYPE : PWM - SAMINCO MODEL VF1801			
FREQ. RANGE	MINIMUM SWITCH FREQ.	SUPPLY VOLTAGE TO MOTOR			RATED TORQUE @ CURRENT	PEAK STALL TORQUE @ CURRENT	
0 - 120Hz	1 kHz	1193 V MAXIMUM			370Nm @ 34A	1000Nm @ 78A	
RPM	DUTY	INS.	IP	TEMP. RISE	ENCLOSURE	PROTECTION	
0 - 3600	1 HR	H	55	120°C	T.E. - N.V.	Ex dI Mb	
WATERCOOLING REQUIREMENTS					CERTIFICATION NUMBER		
MINIMUM FLOW RATE		N/A			MSHA APPROVAL	MSHA: 07-JA050005-0	
Max. INPUT WATER TEMP.		N/A			ANZEx APPROVAL		
Max. WATER PRESSURE		N/A			SANS APPROVAL		
MADE IN SOUTH AFRICA BY TRANSVAAL ELECTRIC MOTORS					MA APPROVAL		
					41928		

Internal Encoder on motor gives **Closed Loop Control** down to zero speed. This gives full control of machine to slow, creep and hold on any mining grade. Energy saving full regenerative braking allows slowing and stopping of the machine indefinitely without inverter or motor overheating.



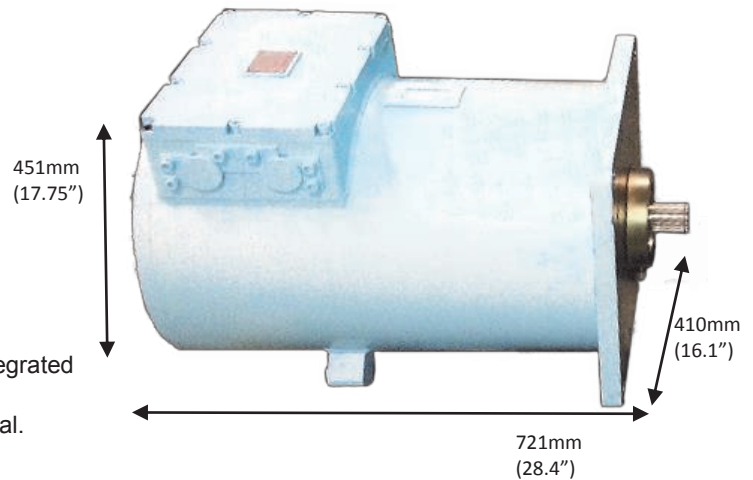
TM1200 COOL-TORQUE™ MOTOR



TM1200 COOL-TORQUE™ MOTOR FOR CONTINUOUS MINERS (WATER COOLED)

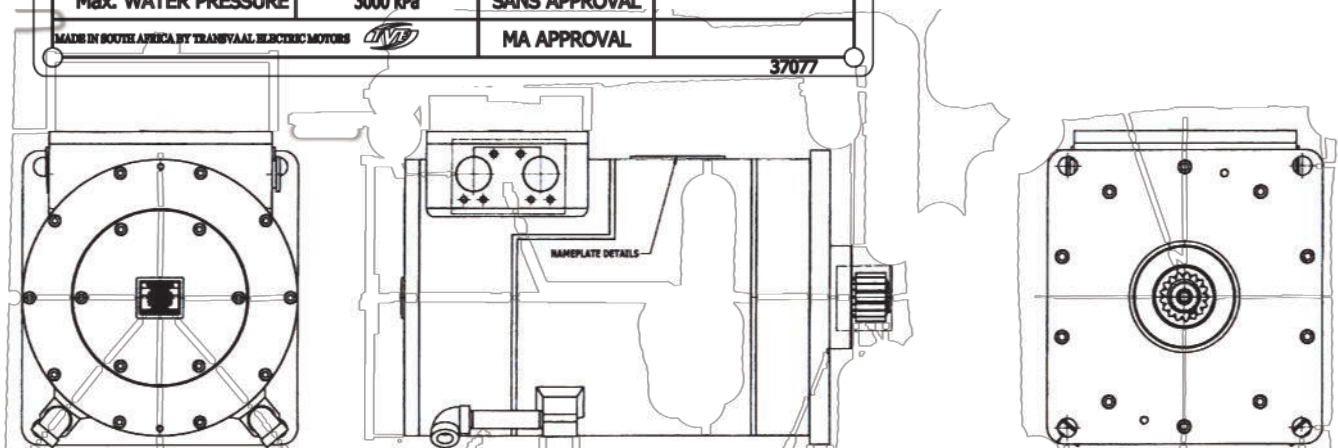
Saminco part number: M6005-037

Continuous Miner Traction Motor
Water Cooled
Model: TM1200
1200Nm stall torque



- Two water connections (inlet and outlet) to a fully integrated wrap around water jacket design.
- 100% water cooled coverage over active core material.
- Inner jacket can last 10+ years.
- Optimized thermal circuit design with minimum thermal path length to cooling medium and epoxy resin in stator winding to ensure minimum optimum heat transfer from stator slot to stator back.
- Machine Runs cool - no water cooling required during extended tramming for place changes. **Low Current draw of motor (Low AMPS) = extended LIFE.**
- Torque and speed-sharing between motors with greater starting torque.
- Proximity detection system ready for reliable stopping and creep speed control.

SAMINCO		TORQUE MOTOR FOR CONVERTER SUPPLY				
		MODEL NUMBER : TM 1200		SERIAL NUMBER :		
ELECTRIC TRACTION DRIVES		CONVERTER TYPE : PWM - SAMINCO MODEL VF1801				
FREQ. RANGE	MINIMUM SWITCH FREQ.	SUPPLY VOLTAGE TO MOTOR		RATED TORQUE @ CURRENT		PEAK STALL TORQUE @ CURRENT
0 - 120Hz	1 kHz	1140 V MAXIMUM		517Nm @ 41.5A		1200Nm @ 84.5A
RPM	DUTY	INS.	IP	TEMP. RISE	ENCLOSURE	PROTECTION
0 - 3600	1 HR	H	65	100°C	T.E - IM B5 - IC 70 W	Ex d I Mb
WATERCOOLING REQUIREMENTS					CERTIFICATION NUMBER	
MINIMUM FLOW RATE		20 LITRES PER MINUTE			MSHA APPROVAL	MSHA: 07-JA150001-0
Max. INPUT WATER TEMP.		20 DEGREES CELSIUS			ANZEx APPROVAL	
Max. WATER PRESSURE		3000 kPa			SANS APPROVAL	
MADE IN SOUTH AFRICA BY TRANSVAAL ELECTRIC MOTORS					MA APPROVAL	



FEATURES OF COOL-TORQUE™ MOTORS

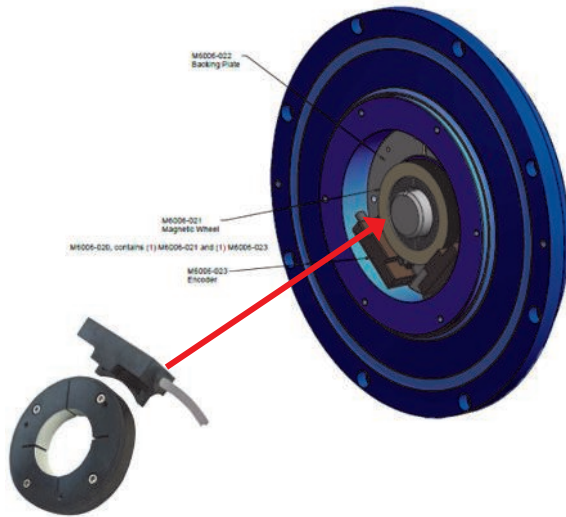


PROXIMITY DETECTION READY



The Saminco Cool-Torque™ motor, using the latest in encoder technology, is designed to perform with the Saminco JR1000 system, delivering accurate controlled torque and speed. Interactions between the drive and the motor mean that speed can be controlled whether the vehicle is on smooth or rough terrain, and even more importantly, on an incline, when the Saminco JR1000 variable frequency drive (VFD) will use the regenerative braking abilities of our motor to hold the vehicle in position or to slow forward movement. The Saminco Cool-Torque™ motor is designed to take advantage of all the capabilities of the our VFD drives.

ENCODER DESIGN



- Specially designed, with collaboration between Dynapar and Saminco, to exceed the needs of the mining industry.
- Easily replaceable. It is internal to the motor, but installed through a bolt-on cover with a modular design for compact mounting.
- Wide-gap magnetic sensing technology for trouble-free operation.
- Greater gap tolerance results in more allowable bearing wear.
- 5-26 volt signal yields greater precision and accuracy.
- Encapsulated electronics for environmental protection.
- Drive is able to perform with full control at 90° quadrature with the added benefits of:
 - ◆ Proximity – slowdown and stop
 - ◆ Full proportional torque at full speed range.

ROTOR DESIGN

The Saminco Cool-Torque™ motor is made with a copper alloy fabricated rotor design that is highly efficient with less slip and lower rotor losses when compared to the equivalent aluminum die-cast rotor. It has the flexibility to adapt to individual load requirements. Fault detection is normally visually detectable and can also be detected by a Growler test.



Pictured: Copper bar rotors

RETROFIT CAPABILITIES



Saminco offers the engineering capabilities to retrofit any model of machine and assist with the MSHA machine approval.



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



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