

# CARTER PERMANENT MAGNET DC TACH GENERATORS

6/7  
7" dia roller

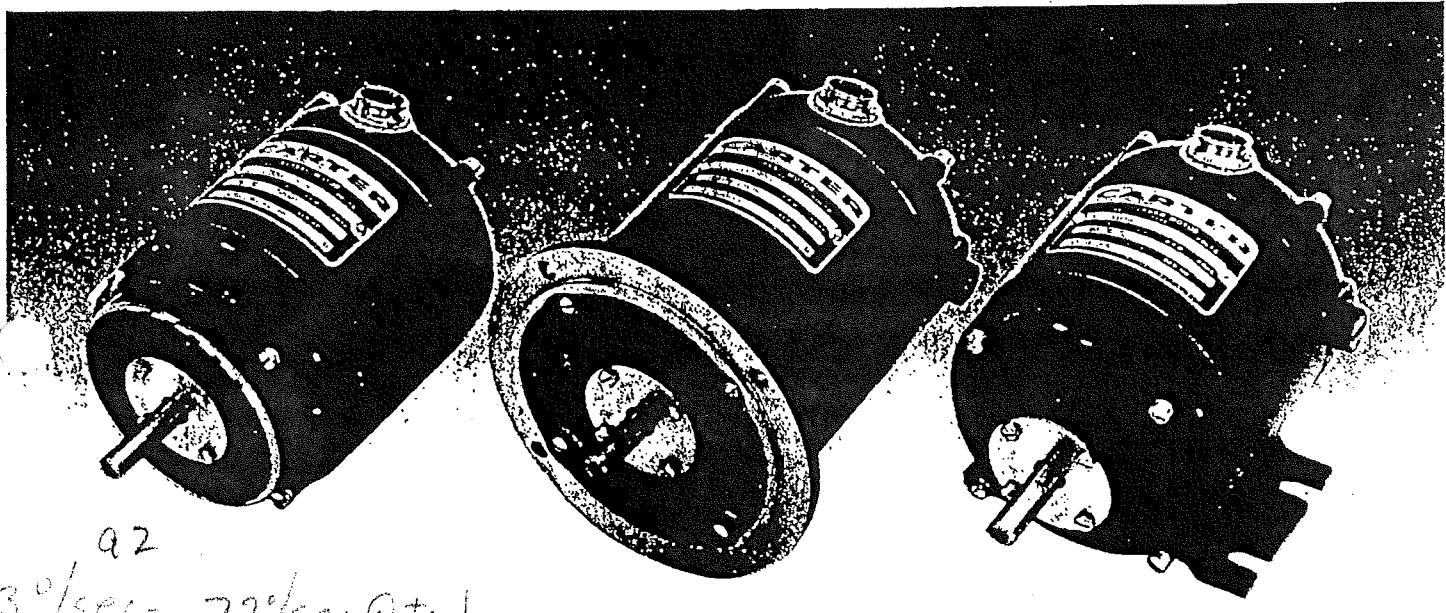
High output models ideal for slow speed applications.  
Rugged, long life, accurate, low cost.

14/30 rpm

54:1 alt  
24:1 a2

Today's industrial automation demands product quality, control and performance. Accurate, continuous measurement of rotating and surface speeds can improve your product's quality and lower cost in many applications. Carter DC Tachometer Generators provide a simple and dependable means to obtain your speed measurements. Our Tach Generators deliver higher output voltages for slow speed applications.

Carter PM DC Tach Generators are designed to meet the need for high output DC models for commercial and industrial applications. Rugged in design as well as performance, our tachs deliver outputs from 5 to 60 volts per thousand RPM. Excellent inherent reliability for long life, trouble free service. Carter Tach Generators will help you measure and control your product quality and performance, accurately, dependably, and at low cost.



a2  
 $3^\circ/\text{sec} = 72^\circ/\text{sec} @ \text{tach} = .72\text{v}$

FIG. 12

FIG. 13

FIG. 14

## SPECIFICATIONS

Maximum output up to 15 watts capacity at 3600 RPM. Driving torque, 1 oz. in. average. Maximum speed 10,000 RPM or 200 volts with capacitor filter. Linearity at 25 degrees C, one direction 1%, either direction 3%. Ripple 3% filtered, 5% unfiltered, per IEEE test #251. Temperature range -40 degrees C to +75 degrees C (not temperature compensated.) 2 lead reversible. Continuous duty. Totally enclosed. Electrical and mechanical modifications available per your specifications.

Model Number	DC output Volts per/1000	Mounting	Maximum Speed RPM
CTA60AA	60	base	3000
CTA60BA	60	face	3000
CTA60DA	60	flange	3000
CTA50AA	50	base	4000
CTA50BA	50	face	4000
CTA50DA	50	flange	4000
CTA25AA	25	base	8000
CTA25BA	25	face	8000
CTA25DA	25	flange	8000

OTHER VOLTAGES AVAILABLE ON ORDER

With a Carter PM DC tach coupled directly to the drive source, there is no need to increase shaft speeds with belts or gearing to obtain sufficient output voltage. Gear backlash and accumulated drive errors are eliminated.

# CARTER CLASSIC TACH GENERATORS

## DIMENSIONS AND WEIGHTS

OUTPUT VOLTS 5 TO 60 PER 1000 RPM  
 MAXIMUM RPM 10,000 RPM  
 MAXIMUM POWER OUTPUT 15 WATTS  
 CTA-AA-BA-DA 4-1/2 LBS. L = 4-1/2 IN.

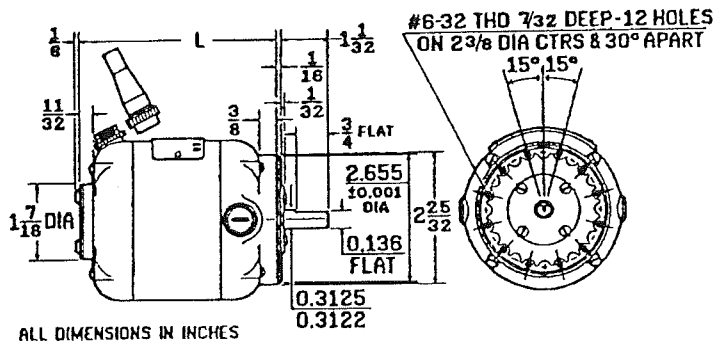


FIG. 12

OUTPUT VOLTS 5 TO 60 PER 1000 RPM  
 MAXIMUM RPM 10,000 RPM  
 MAXIMUM POWER OUTPUT 15 WATTS  
 CTA-AA-BA-DA 4-1/2 LBS. L = 4-13/32 IN.

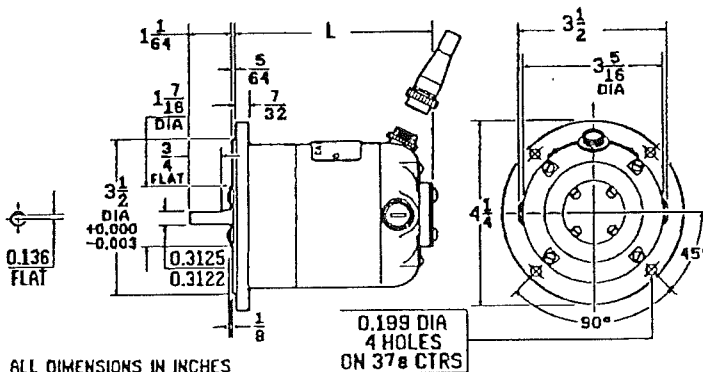


FIG. 13

OUTPUT VOLTS 5 TO 60 PER 1000 RPM  
 MAXIMUM RPM 10,000 RPM  
 MAXIMUM POWER OUTPUT 15 WATTS  
 CTA-AA-BA-DA 4-1/2 LBS. L = 4-1/2 IN.

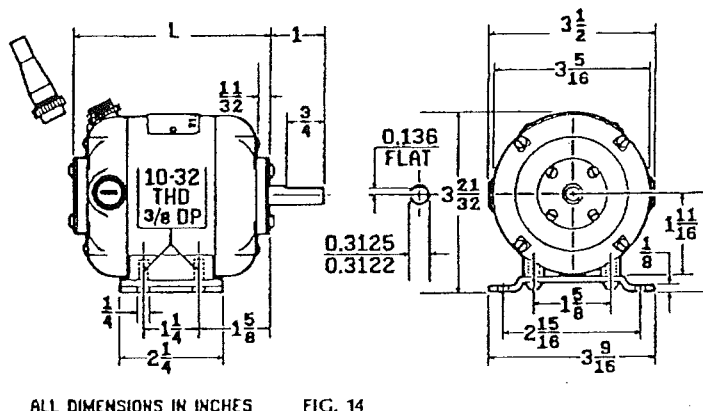


FIG. 14

### CONVERSION FACTORS

#### POWER

HP = TORQUE (LB IN) X SPEED (RPM) ÷ 63025  
 HP = WATTS ÷ 745.7  
 WATTS = HP X 745.7

#### SAFETY

"The use of electrical motors and generators like that of all other utilization of concentrated power, is potentially hazardous. The degree of hazard can be greatly reduced by proper design, selection, installation and use, but hazards cannot be completely eliminated. The reduction of hazard is the joint responsibility of the user, the manufacturer of the driven or driving equipment and the manufacturer of the motor or generator."

Since even well built apparatus can be installed or operated in a hazardous environment it is important that the user observe safety considerations. To protect operating personnel from electrical shocks, fires, or explosions, proper consideration to the use of grounding, thermal and overcurrent protection, and good maintenance procedures should be given.

#### TORQUE

OZ IN = LB FT X 192.0  
 LB FT = OZ IN ÷ 16 ÷ 12

#### NORMAL OPERATING CONDITIONS

- 1) Motors rated for continuous duty, based on 8 hours per day; 5 days per week. Products intended for intermittent duty, should keep the winding temperature within the maximum allowable temperature of the insulation system.
- 2) Ambient operating temperatures should not exceed 50 degrees C., (104°F). Higher ambient temperatures will shorten motor life.
- 3) Load — uniform and free from shock or high inertia.
- 4) Voltage — within 10% of nameplate rating.

\*Standard publications ANSI C51-1/NEMA MG-2 • NATIONAL ELECTRICAL MFG. ASSOCIATION • WASHINGTON, D.C.

CAUTION: The models listed in this catalog are not explosion proof types, and should not be operated in hazardous conditions.