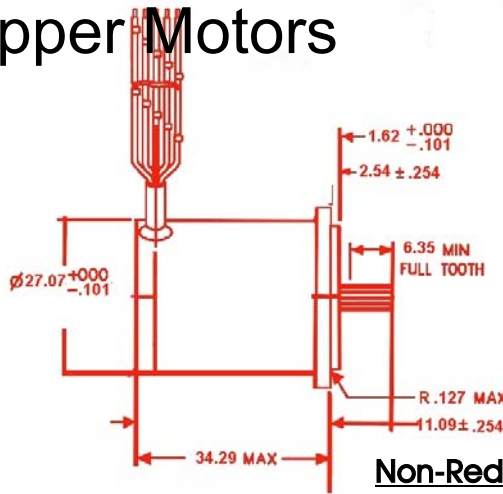
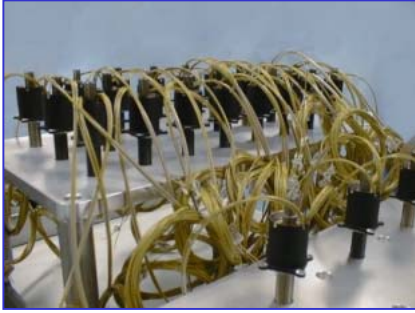


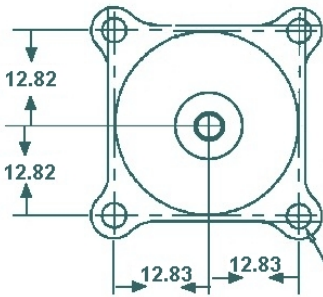
90 Degree Stepper Motors Size 11



Unipolar Windings

<u>Non-Redundant</u>		<u>Redundant</u>	
<u>101</u>	<u>102</u>	<u>201</u>	<u>202</u>

Pulse Rate (pps max)	150	150	150	150
Km (Nm/ $\sqrt{\text{watts}}$)	.007	.007	.004	.004
Running torque @60 pps (Nm)	.008	.008	.006	.006
Holding torque (Nm)	.019	.019	.014	.014
Detent torque (Nm)	.003	.003	.003	.003
Kt (Nm/amp)	.056	.028	.028	.014
Phase resistance (ohms)	68	18	34	8.5
Power - Single Winding (watts)	8.5	8.5	8.5	8.5



4x $\phi 3.37^{+.152}_{-.000}$
 $\phi .010$ A B C

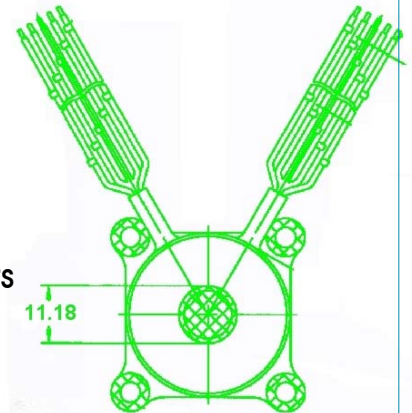
Bipolar Windings

<u>Non-Redundant</u>		<u>Redundant</u>	
<u>101</u>	<u>102</u>	<u>201</u>	<u>202</u>

Pulse Rate (pps max)	150	150	150	150
Km (Nm/ $\sqrt{\text{watts}}$)	.010	.010	.007	.007
Running torque @61 pps (Nm)	.008	.008	.008	.008
Holding torque (Nm)	.019	.019	.019	.019
Detent torque (Nm)	.003	.003	.003	.003
Kt (Nm/amp)	.11	.055	.055	.028
Phase resistance (ohms)	135	34	68	17
Power - Single Winding (watts)	4.2	4.2	8.4	8.4

Features

- Space Qualified
- Available with pinion for gearhead applications
- Redundant winding option available
- Unipolar or Bipolar drive winding options available
- Ceramic or steel ball bearing options are available
- Dry or wet lubrication options are available
- All materials are compliant with NASA outgassing requirements



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