

American Industrial Machinery, Inc.

The **AIM** "Insider"

Fall, 2007 Edition



SPOTLIGHT ON GEOFF WOODS

Geoff is a Mechanical Engineer and has been with AIM since 2002. He has a BSME from Purdue University, West Lafayette, and also has an Associates Degree in Automotive Technology. Geoff is also a certified ASE master technician and previously worked as a service technician at one of Northwest Indiana's largest new car dealerships. Before joining AIM, Geoff also worked as a design and field engineer for a company which designed and built coil processing equipment.

What Geoff likes most about being at AIM is the challenge of working on a wide variety of projects. In addition to projects of various sizes, there are projects with hydraulic vs. pneumatic power, or mechanical vs. electrical systems. Most projects at AIM are one-of-a-kind, and this is just the way Geoff likes it.

In his off-work hours, what Geoff enjoys most are activities with his seven year-old son such as fishing, baseball and football. They often fish at Lake George, however, they occasionally have gone charter boat perch fishing in Lake Michigan. Not surprising given his automotive background, another hobby of Geoff's is restoring and racing 60's and 70's vintage muscle cars. Check out this picture of Geoff racing his Nova SS 454.



Geoff in Action



Choosing a Gearmotor

It's rare to visit a customer's facilities and not see a gearmotor on at least one piece of equipment. Simply stated, a gearmotor is a combination of an AC electrical motor and a speed reducer (gearbox). Here are some basic considerations when selecting one:

- What is the required horsepower (HP)? There is one formula to use for a lifting application and a different one for a lateral traverse application. If it's a lateral application, then one needs to determine the coefficient of sliding friction (COF). Acceleration must also be considered.
- What reduction ratio do we need? To determine this, we need to calculate the desired speed of the gearmotor's output shaft. Reduction ratio is then the motor's speed (generally 1750 RPM) divided by the output speed we just calculated.
- We also must select the type of gearmotor needed for application. For example, do we need a foot-mounted parallel shaft unit or a right-angled unit? Also, do we need a standard unit with an output shaft(s) or can we use a "hollow-shaft" unit?

The above items are just a few of the considerations when choosing a gearmotor. Let one of AIM's qualified engineers select the appropriate gearmotor for your project.

From the Corner Office by Mike Dolder, President

With each newsletter, our goal is to provide information which discusses current events, is educational or perhaps sometimes is even amusing. We do this to maintain communications with you when ongoing face-to-face contact is increasingly difficult with everyone's time commitments these days.

The theme of this newsletter, however, is different as it focuses on what we cannot and will not tell you or show you. Since we started AIM 11 years ago, customers repeatedly have trusted AIM to provide them with effective and reliable equipment to support their proprietary manufacturing processes. It is a responsibility we never take lightly, and in fact, we consider it our privilege to work on projects such as these.

So, please enjoy the project pictures on the reverse side of the newsletter. (Perhaps, I should call them "non-pictures".) What each picture represents is a customer who has relied on AIM to maintain confidentiality while designing and building equipment which meets or exceeds their expectations. When you need a custom piece of machinery, such as those featured in this newsletter, please give us a call. We look forward to discussing your needs.



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Miscellaneous:

- ◆ Timothy Clasby and Andy Dolder, students at Rose-Hulman and Marquette University respectively, returned to school in late August. Both of these interns made significant contributions at AIM this summer, and they will be missed.
- ◆ On August 27, AIM welcomed John Decker. John will work part-time as he completes his engineering studies at Purdue University, Hammond, IN campus.
- ◆ Chicago received 9.70 inches of rain for the month of August, which is the fourth highest rainfall total in history. The resultant flooding caused our local Frank Borman Expressway (I80/94) to be partially or fully closed over the August 25-26 weekend.

The “Insider”

PHOTOS OF PROPRIETARY EQUIPMENT – WHAT WE CAN SHOW YOU



A mystery shipment in transit.



Can you tell what this is?



What is it? And who's the guy?



Here, all we can show is the nameplate.