



Dear Editors,

I received the May issue of *Gear Technology* today and have been fascinated reading your “Ask the Expert” feature.

Assuming you haven’t already heard from someone else, I wanted to check in on this subject.

The engineer at WEG (Walmir Fernandes Navarro) seems to be questioning the discrepancy between what is known about efficiency vs. ratio of hypoid and other gears and what gear motor manufacturers claim in their marketing for gear motors containing hypoid gearing.

I’m not an engineer, but a lot of good information and theory was presented without addressing the obvious answer that explains the discrepancy puzzling Mr. Navarro.

(George) Lian and (Ted) Krenzer touched on it by noting the Sumitomo gear motors use hypoid in the ‘input’ stage.

It’s pretty simple that the majority of the reduction without loss in efficiency comes from using spur gears in subsequent stages. They’re just using a low-ratio hypoid (10:1 or less) to turn the corner.

I have attached two Sumitomo cutaway images that show the hypoid in the first stage followed by spur gearing.

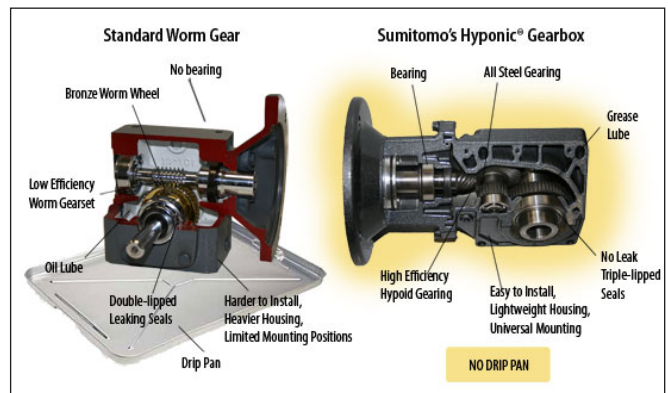
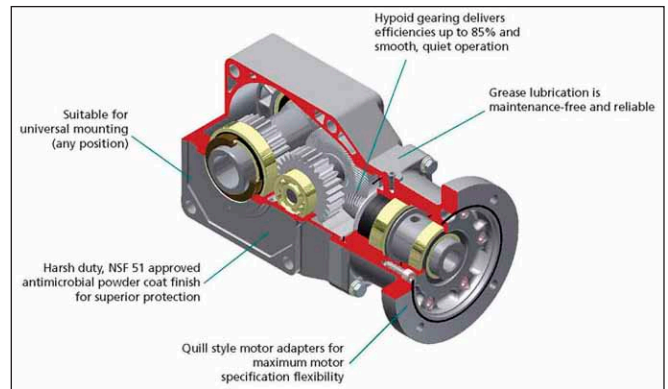
It’s surprising nobody mentioned (New Jersey-based) Brother International ([www.brother-usa.com](http://www.brother-usa.com)) gear motors (made by Nissei and marketed here by Brother), because they use basically the same idea.

With the cost of hypoid gearing and complexities of different offsets, it’s much easier to standardize on one gear set to turn the corner and use spur or helical to maintain high efficiency for overall high reduction in the gear motor.

Thanks for indulging me.

Best regards,

**John Morehead**, vice president, business development  
*Dunkermotoren USA Inc.*



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