

Clarkson University's

Electric Knights

SAE Electric Snowmobile Competition

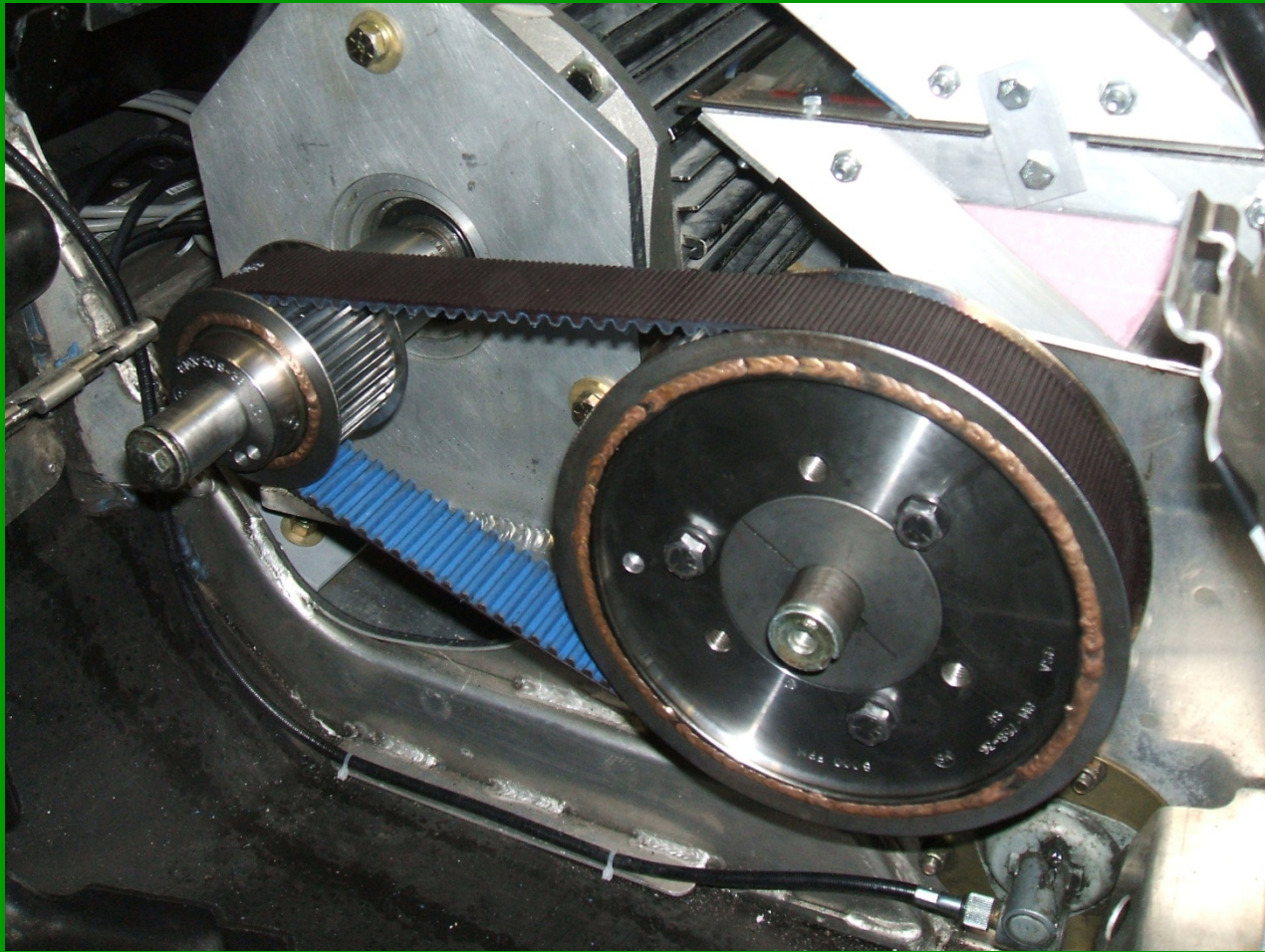
Overall Appeal

- Environmental Effects
- Performance/Handling
- Weight
- Rider Comfort

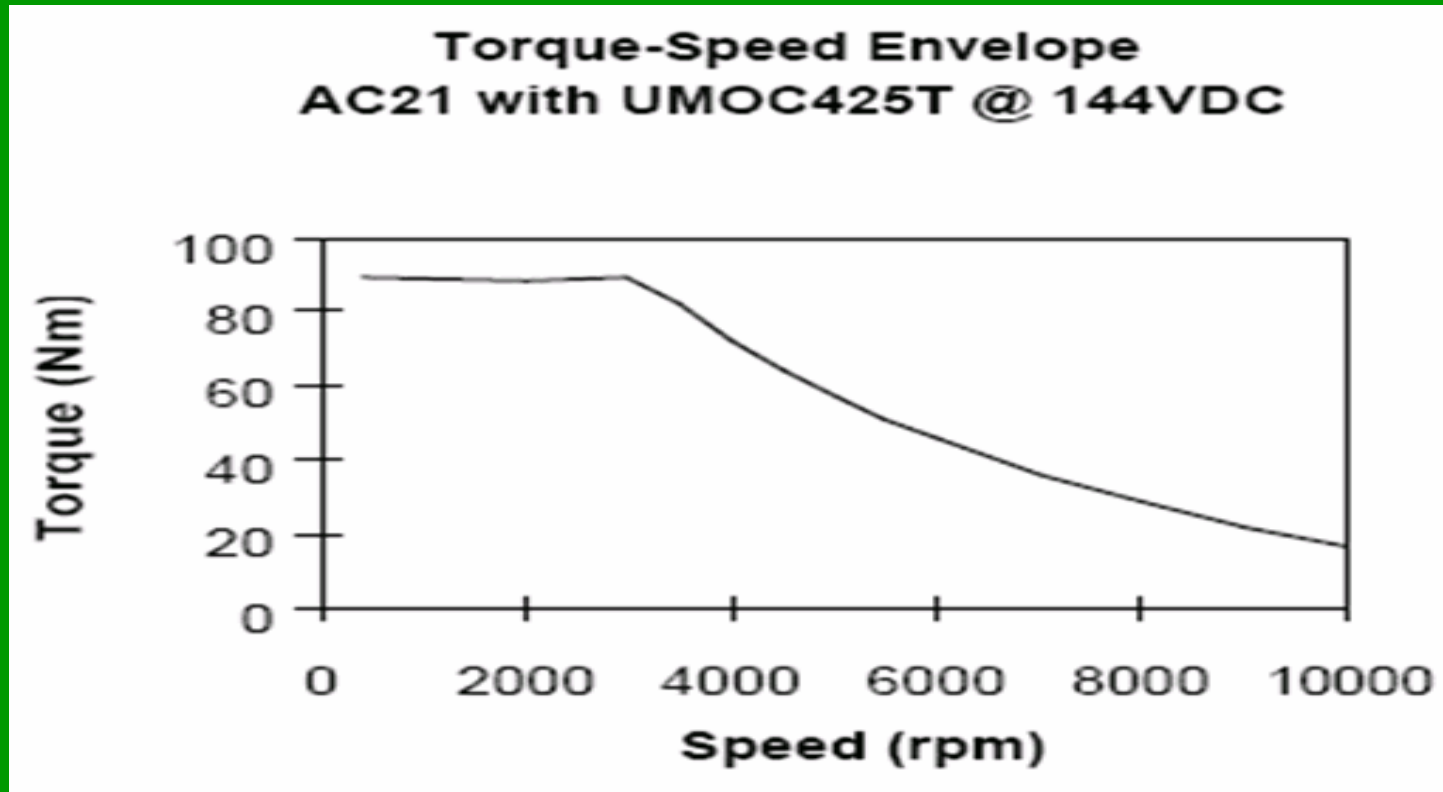
2007 Clarkson University Electric Snowmobile



Belt Drive System



Instant Torque



Battery Selection

- Operating Temperature
- Energy Density
- Discharge Rate
- Price
- Useful Lifespan
- Safety

Battery Energy

Battery Type	Energy Density (Wh/kg)	Price (\$US)	Disadvantages	Recharg Cycles	Peak Discharge Rate times cell capacity (A)	Operating Temperature (° C)
Lead Acid	30-40	5-8	Weight, Short Life Span	500-800	3.5x	-40 to +60
Nickel Medal Hydride	30-80	1.37	Weight, Low Discharge Rate	1000	2.3x	-30 to +60
Lithium Ion	160	2.8-5	Volatile, Cost, Low Discharge Rate	1200	2x	-20 to +60
Lithium Polymer	130-200	2.8-5	Cost, Short Life Span	500	5x	-10 to +60

Durability & Maintenance

- Charging and Charge Capacity
 - Cell Memories
- Battery Pack Lifespan
- Battery Management System

Dealer Benefits

- Cost
- Easy to Operate
- Rider Comfort

Environmental Appeal

- Zero-Emissions
- Noise Pollution
 - Land Owners

Conclusion

