

UT-301_{EV} Design Series

Up To 57 HP (42.5 kW) Electric Vehicle

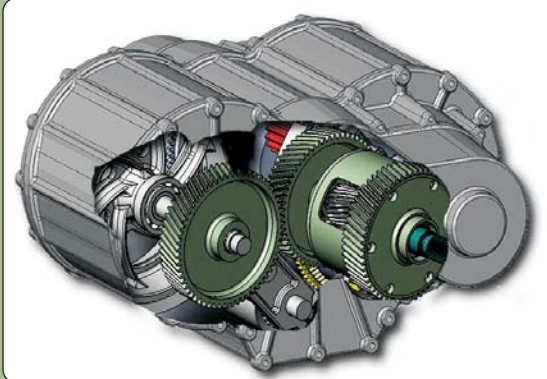
The UT-301_{EV} Design Series Universal Transmission system consists of an engine mounted, positively displaced, infinitely variable power shift transmission.

It features a patent-pending, constantly engaged, metal-to-metal drive chain with compensating Moongears™, a torque splitter, and an engaged neutral Varadrive™.



Features & Benefits

- **Increased power and torque capacity:** to mate with a wide range of high torque engines.
- **Infinitely variable ratios:** the positively displaced, constantly engaged **UT-301_{EV}** matches any engine speed without the use of a clutch or torque converter, resulting in infinite increments of ratio change.
- **Minimal dynamic friction:** the patent-pending precision drive chain design, with compensating Moongears, provides constant metal-to-metal engagement and no significant dynamic friction, resulting in increased torque capabilities above all current CVTs and greatly improved (up to 30% or more) fuel efficiency.
- **Torque management:** the torque splitter decreases wear on the transmission and results in better power utilization.
- **Engaged neutral:** achieves constant positive engagement allowing maximum torque from zero to designed infinity forward and reverse. No torque converter is needed.
- **Ease of use:** the elegant design with electronic/mechatronic controls eliminate the clutch. The operators are free to concentrate on the primary mission. Simple operation reduces training requirements.
- **Reduced downtime:** durable, robust, standard components reduce downtime. Increased machine availability and less wear and tear on other machine components assures longer life in all vehicle operations.



- **Drive motor controller replacement:** in hybrid and electric applications the **UT-301_{EV}** series eliminates the need for expensive motor speed controllers – thus electric/hybrid vehicles or light trucks can utilize low voltage battery systems.
- **Integrated system components:** integral power division from the torque splitter, with increased performance from the engaged precision drive chain and compensating Moongears, are all designed to work together with the engaged neutral Varadrive as a system rather than a collection of parts.

Hybrid Economy with NASCAR Performance

*Specifications subject to change without prior notice in the interest of continual product improvement.
Contact a VMT representative for engineering specifications.*





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Electric Vehicle Series

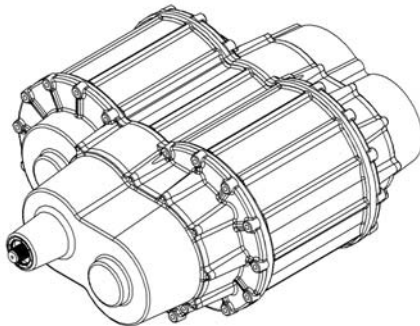
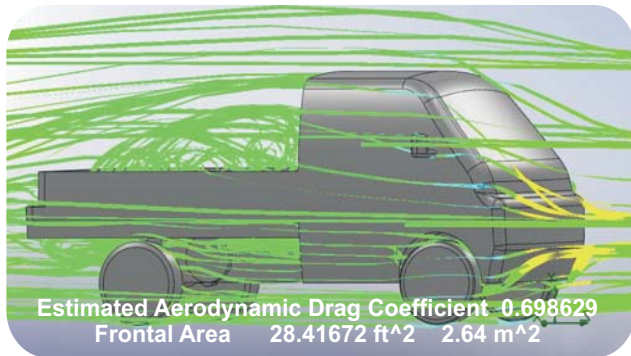


VMT puts horsepower to work by designing and engineering rugged-duty, fuel efficient, maximum torque transmission technology.

Our technology is designed to attract the most renowned manufacturers and equipment OEMs in the world

Our goal is to make your machines and vehicles more productive, fuel efficient and durable. Also making them more economical to produce and maintain, and more operator friendly than with any other transmission.

From custom design development to after sale support, VMT is totally committed to your business.



Length: 29.08 in. 738 mm
Height: 13.28 in. 338 mm
Width: 26.40 in. 545 mm

Transmission:

Input Torque Limit 400 lb-ft 542.3 Nm
Output Torque Limit 600 lb-ft 813.5 Nm
Weight/Mass 176 lbs 80 kg
Mass Specific Density 6.77 Nm/kg
Torque Specific Density .147 kg/Nm
Forward Drive Ratio 26.1:1 - .711:1
Reverse Ratio 25.15:1 - 12.69:1
Axle Drive Ratio 3.83:1

Electric Truck:

Length	13 ft	3.96 m
Width	6.5 ft	1.98 m
Height	6 ft	1.83 m
Unladen weight/mass	li-ion 2400 lbs	1091 kg
	pb 3400 lbs	1545 kg
Payload	li-ion 1200 lbs	545 kg
	pb 800 lbs	364 kg
GVW	li-ion 3600 lbs	1636 kg
	pb 4500 lbs	1800 kg
Wheelbase	8 ft	2.44 m
Track	5.5 ft	1.68 m
Tire Size	185/75R13	

Performance:

Top Speed @ 3000 Motor RPM	73 mph	117 km/h
Braking Distance 60-0mph	150 ft	45.72 m
Acceleration 0-60 mph	20 sec	
Highway Range @ 65 mph	24 miles	39 km
Highway Range @ 45 mph	45 miles	72 km
City 30 mph & 150 stops	66 miles	106 km
Regeneration	50 %	

Motor Type: Permanent Magnet

Stall Torque	200 lb-ft	271.2 Nm
Torque at max power	100 lb-ft	135.6 Nm
Max Power	57 hp	42.5 kW
Max Power Speed	3000 rpm	
Max Speed	6000 rpm	
Batteries:	li-ion 495 lb	225 kg
	pb 1697 lb	771 kg
Capacity	30 kWh	



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Note: Use of vehicle pictures is for vehicle class illustrative purposes only and does not constitute an endorsement of the Universal Transmission by the respective manufacturers.