Medium Duty Permanent Magnet Motor/Generator “HPM450”

PRODUCT OVERVIEW:

The HPM450 is a permanent magnet motor designed for medium duty electric and hybrid vehicles and mobile generator applications. High torque and power density with excellent energy efficiency. When used in conjunction with our Integrated Power Unit it can be operated over a wide dynamic range. It can operate in either torque or speed control mode with full control of DC current, power and operating voltage. The system offers extensive J1939 CAN compliance and RS232 diagnostics. It can be used as a hybrid drive motor or generator with command and control via CAN/J1939.

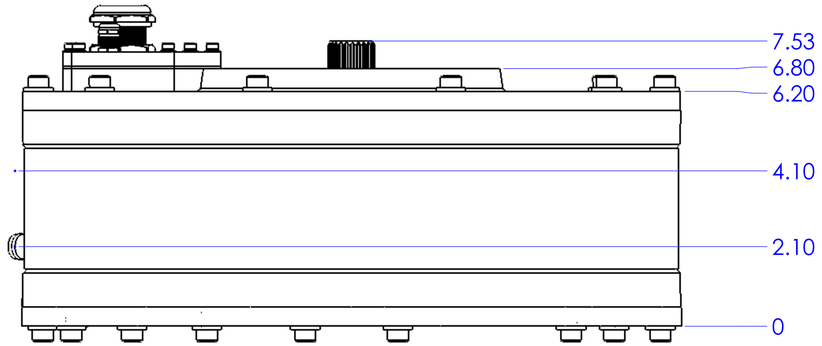
FEATURES:

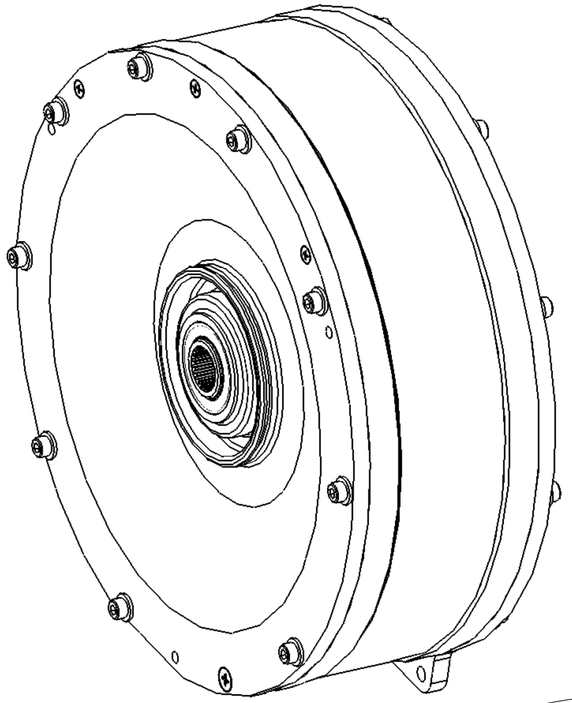
- Input voltage: 250 - 450Vdc or 550 - 700Vdc
- High Torque/power Density,
- Efficiency: 96% Motor, 98% Controller.
- CAN command, control and diagnostics.
- Output voltage can be regulated via CAN/Analog command.
- Vector controlled Torque or Speed Command.
- Motoring and Generation Capability

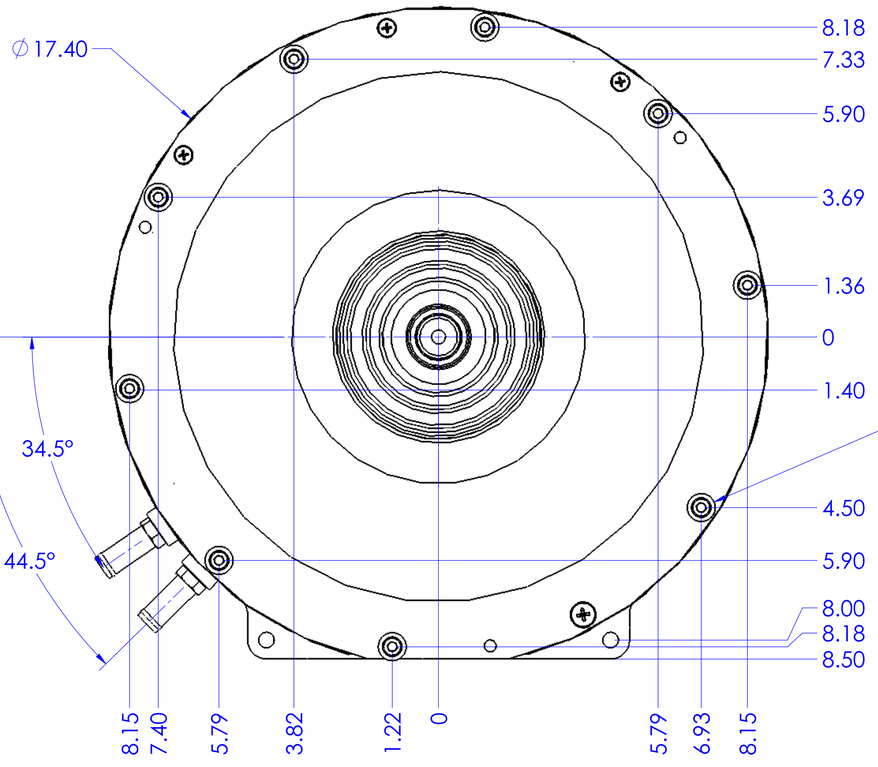
APPLICATIONS:

Electric and Fuel Cell Vehicles drive or APU and Stationary Power Systems.

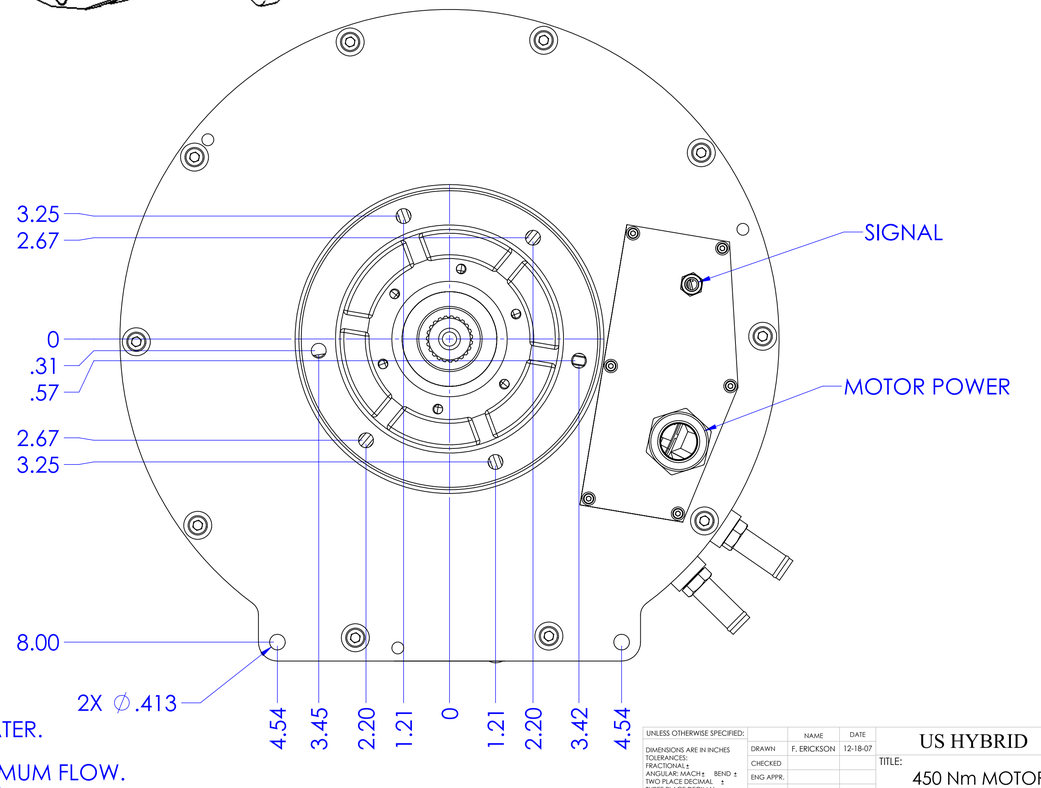
Motor Type	Permanent magnet
Torque (Max)	450Nm
Power (Max)	120kW
Speed (Max)	4500 rpm
Weight	65 kg
Input Voltage	Med V: 250Vdc-450Vdc High V: 450Vdc-700Vdc
Cooling	Liquid cooling, 60C
Shaft	SAE / Custom
Efficiency	Motor > 96%
Isolation resistance	> 1 MΩ at 700Vdc







12X M8-0.7 (MAY BE USED FOR MOUNTING PURPOSES)



NOTES: UNLESS OTHERWISE SPECIFIED

1. MOTOR WEIGHT: 47.2 kg (105 LBS.).
2. COOLANT: 50/50 ETHYLENE GLYCOL / WATER.
3. MIN FLOW: 11.4L / MIN (3.0 GPM).
4. PRESSURE DROP: 20.68 kPa (3.0 PSI)@MINIMUM FLOW.
5. PRESSURE DROP: 34.47 kPa (5.0 PSI)@40°C.
6. INLET TEMP: -20°C TO 60°C.
7. OPTIONAL HOSE FITTINGS: 3/4" , 3/8" OR 90 DEG. FITTINGS.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
-
FINISH
-

	NAME	DATE
DRAWN	F. ERICKSON	12-18-07
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

US HYBRID

TITLE: 450 Nm MOTOR OUTLINE & MOUNTING

SIZE D | DWG. NO. MT120000D- | REV -

SCALE: 1:2 | WEIGHT: | SHEET 1 OF 1

REV -
DWG MT120000D-
DATE 12-18-07