



# MTI Motion

OVERVIEW CAPABILITIES



# Our industries

## Aerospace & Defense



Commercial aerospace



Defense



Space

## Industrial



Transportation refrigeration units (TRUs)



Hybrid electric Vehicles (HEVs)



Industrial machinery



Medical devices



Oil & gas downhole equipment



# Facilities



**Wisconsin: 300**  
employees



**Matamoros: 380**  
employees



# A few of our customers





## Motor, ball screw & gear solutions – A&D

### Defense

- Missile control-actuation systems
  - Small DC brushless motors used on 11 missile platforms
  - Ball screws
- Unmanned aerial vehicles (UAVs)
  - More than 20 motors
  - Starter generators
- Thrust-vector control motors
  - Missiles
  - Intercontinental ballistic missiles (ICBMs)
  - Near-Earth orbit commercial space travel escape pods
- Environmental-control blowers for armored vehicles

Our experience designing motors for the downhole industry is proving valuable in hypersonics due to the extreme temperature and pressure requirements.

### Commercial aerospace

- Control actuation pump motors
  - Provides hydraulic power to control surfaces of aircraft
- Recirculation fans
  - Standard 400 Hz and variable-frequency motors for commercial and military recirculation fans
- Thrust-reverser ball screws for major commercial aircraft
- Air taxi and medical helicopters rotary and linear actuators
  - For blade pitch, control surfaces and throttle
- Ejection seat height and head rest adjustment motors
- Traction motors driving ROVs
- Starter generators for regional jet auxiliary power units (APUs)



## Large, liquid-cooled motors

300-500 HP

This 300-500 hp motor is a high-performance permanent-magnet motor, which can be used in a variety of demanding applications.

### FEATURES

- Rated power: 300-500 hp
- Rated torque: 465 ft-lbs
- Peak torque: 700 ft-lbs
- Speed: Max 8,000 rpm
- Voltage: 460 VAC
- Current: 455 amps
- Phases: Three-phase
- Cooling: Liquid-oil cooled
- Poles: 16 poles
- Feedback: Hall sensors
- Envelope: 13-in diameter x 20-inch length

### BENEFITS

- High operating efficiency
- High torque density
- Rugged industrial design
- Low maintenance
- High-energy NdFeB (Neodymium) magnets



## Permanent-magnet generator capabilities

### 120kW GENERATOR

This generator is a high-performance permanent-magnet generator, which can be used in a variety of demanding applications.

#### FEATURES

- Rated output: 120 kW
- Speed: Max 2,300 rpm
- Voltage: 650 V
- Current: 240 amps
- Phases: Three-phase
- Cooling: Air cooled
- Poles: 24 poles
- Thermo protection: RTD
- Magnets: NdFeB (Neodymium iron boron)

#### BENEFITS

- Rugged, compact design
- Low maintenance
- Permanent magnet
- Multiple windings
- Custom shafts
- Custom connectors
- Efficiency: 96%

