

FAQ



MTS Drum Motor Upgrades

This FAQ explains NGI's modular P and T upgrade options for MTS drum motors.

The upgrades allow the drum motor to be configured for specific electrical and mechanical requirements, depending on the application.

MTS Drum Motor Upgrades

Q1: What makes NGI's drum motors unique?

A: All technology is enclosed within the drum, providing a compact and reliable solution. Without the need for oil, our synchronous motors reduce contamination risks and generate less heat. This leads to higher motor efficiency, less power loss, and reduced energy consumption. Plus, our engineers personally advise you on the best drum motors for your application needs.



P-upgrade (Peak voltages & power)

Q2: What is the P-upgrade?

A: The P-upgrade is a stator and rotor upgrade that combines an improved insulation system with an optimized electromagnetic design. It is designed to handle high peak voltages in inverter-driven applications while also enabling higher power output and increased power density.



Q3: Why does the P-upgrade focus on peak voltages?

A: In inverter-driven systems, long motor cable runs and high supply voltages can generate voltage peaks that stress the motor insulation. These peak voltages increase the risk of insulation breakdown and premature stator failure.

The P-upgrade is engineered to withstand these peak voltages, ensuring reliable operation in demanding electrical installations.

Q4: Which applications benefit most from the P-upgrade?

A: The P-upgrade is designed for applications where peak voltages may occur due to a combination of long motor cable runs and higher grid voltages. This is typically seen in:

- Installations with centralized electrical cabinets, long cable distances, and higher grid voltages (e.g. 480 V)
- Applications requiring higher power output in a compact motor design

In these cases, the P-upgrade helps ensure reliable performance without compromising motor lifetime.



Q5: What problems does the P-upgrade help avoid?

- A:** The P-upgrade helps customers avoid:
- Stator failures caused by peak voltages
 - The need for additional external filters to reduce voltage stress
 - The cost and space of distributing electrical cabinets closer to the motors

This simplifies electrical design while improving operational reliability.



MTS Drum Motor Upgrades

Q6: How does the P-upgrade increase power and power density?

A: The optimized electromagnetic design enables higher power density across the motor range. This allows more power to be delivered from shorter motor lengths and reduced diameters, supporting more compact and flexible machine designs.

T-upgrade (Torque)

Q7: What is the T-upgrade?

A: The T-upgrade is a gearbox upgrade option that provides increased torque capacity by offering a larger gearbox when required by the application. It is designed to handle higher mechanical loads without compromising durability.

Q8: Which applications benefit most from the T-upgrade?

A: The T-upgrade is particularly relevant for:

- Applications with high torque requirements
- Low- and medium-speed applications
- Conveyors or processes with heavy mechanical loads

In these applications, the larger gearbox allows the drum motor to handle demanding load conditions reliably.

Q9: What are the key benefits of the T-upgrade?

A: With the T-upgrade, the drum motor can:

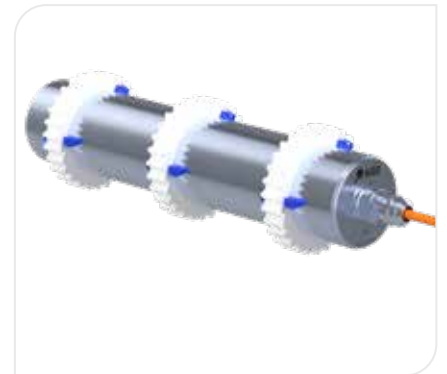
- Handle higher mechanical loads, including inclined conveyors
- Deliver the required torque without overstressing the drivetrain

This makes the T-upgrade the right choice when torque capacity is the primary requirement.

Q10: Can P and T be combined?

A: Yes. The P- and T-upgrades are modular options that can be selected independently or combined, depending on the application requirements.

This allows customers to configure a solution that matches their specific needs for power, peak-voltage robustness, and torque capacity—without overdimensioning the motor.



MTS Drum Motor Upgrades

Q11: What options are available across the complete MTS portfolio?

- A:** Sizes: 61mm to 136mm
Motor sizes: 0.13kW to 1.55kW
Torque and maximum speeds: 2.1Nm to 260Nm and 19 to 600 rpm
Lengths: Various lengths available for applications small or large

Q12: What drum shell profiles are available?

- A:** Our drum motors are available with a wide range of shell designs to meet functional, hygienic, and application-specific requirements. All drum shell profiles can be supplied with integrated sprockets and optional rubber lagging.

Available configurations include:

- Steel drum shells: cylindrical or crowned
- Rubber-lagged drum shells: cylindrical, crowned, or profiled
- Knurled surfaces: cylindrical or crowned, for increased friction
- Keyed drum shell designs: available with welded keys or snap-on keys
- Stainless steel profiled drum shells: for specialized applications

Additional designs and special configurations are available to support specific conveyor layouts, belt types, and performance requirements.

Q13: Can they integrate into existing machines?

- A:** Our drum motors are designed for straightforward integration into existing systems and can operate across a wide range of belt types and conveyor designs.

Q14: What does hygienic design mean in a drum motor?

- A:** Our synchronous drum motors do not require oil, eliminating the risk of oil contamination. The fully enclosed, oil-free design helps prevent moisture, debris, and bacterial infiltration.

