

LiveDrive® Direct Drive

**A New Era in High  
Performance  
Actuation**



# Genesis LiveDrive® LDD 1800 Series



Genesis Robotics &  
Motion Technologies

[genesisrobotics.com](https://www.genesisrobotics.com)

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# The LiveDrive<sup>®</sup> Advantage



## For Robot Manufacturers and System Integrators

Increase sales and create more value for customers.



**Higher value:** Use the LiveDrive advantage to create a unique direct-drive system that is cleaner, simpler and more valuable to your customers.



**Compact footprint:** Implement systems with less floorspace and drive more value from your machinery.



**Faster machine assembly:** Manage fewer components in the supply chain and build systems faster.



**Direct drive safety:** Create direct drive systems with lower inertia and fast stopping times to maximize safety and productivity. Control system safety to meet ISO 15066 for collaborative robots.



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# For End Users

Higher productivity, lower total cost of ownership.



**No product contamination:** Protect valuable product from contamination with no need for additional sealing.



**Higher reliability and reduced downtime:** No downtime due to gear replacement or performance loss over time. LiveDrive Actuators have high reliability, increasing the mean time before failure (MTBF) of the system and keeping production lines running.



**Maintenance Free:** No maintenance of the Actuator required and no stock of gear components and oil, reducing the total cost of ownership.



**High precision:** Improve accuracy and repeatability, fully eliminating backlash inherent in any geared drivetrain.



# The LiveDrive® LDD 1800 Series

## Direct Drive Actuator

The LiveDrive LDD actuator is a high torque, compact, direct drive solution designed for robots and machines in the food, packaging, pharmaceuticals, and electronics industries. With no need for gears, belts, or lubrication, LiveDrive® actuators dramatically simplify the drivetrain, delivering increased performance and lower total cost of ownership. LiveDrive LDD actuators redefine the standard of cleanliness, simplicity and productivity for high throughput machines.











## Product Features

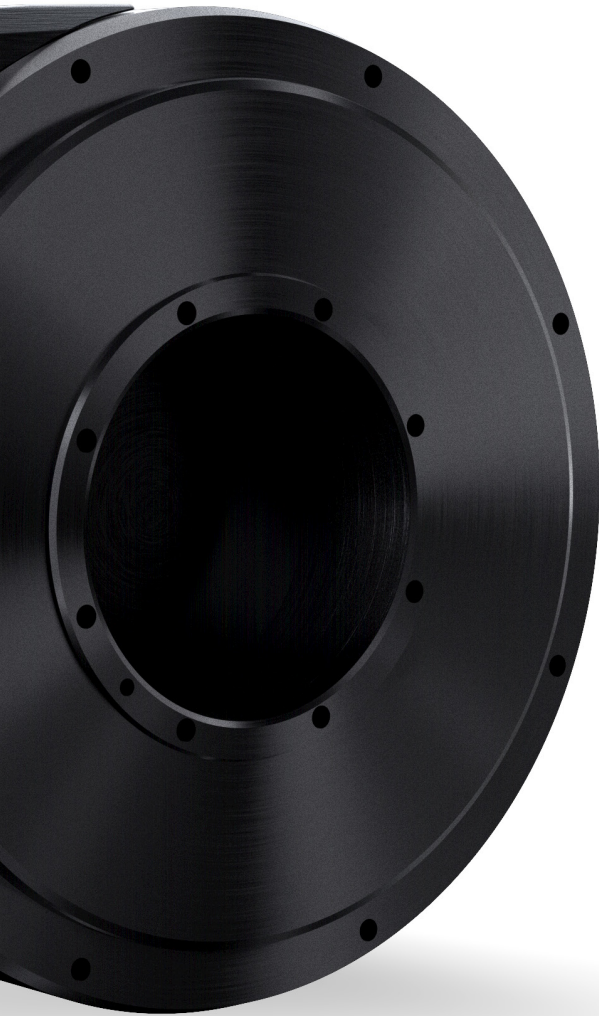
- 56 N·m to 210 N·m peak torque capability
- IP67 housing
- High resolution encoders with Hiperface DSL®, Hiperface®, EnDat 2.2, BiSS-C®
- Compatible with standard industrial servo-drives
- One cable technology (with Hiperface DSL®)
- Integrated holding brake
- Integrated temperature sensors
- UL Registered



## Performance Range

Rated Torque Peak Torque

Available Now		LDD 1840	
Available Q4 2021		LDD 1830	
Expanded model range with <ul style="list-style-type: none"><li>■ Torque up to 210N·m</li><li>■ Standard 400-480 VAC voltage rating</li><li>■ Reduced current draw for higher performance</li></ul>		LDD 1841	
		LDD 1850	
		LDD 1860	



## High Torque

High torque density removes the need for a gearbox



## Compact

Compact form factor reduces machine footprint



## Low Inertia

Increases acceleration and stopping time for higher productivity and safety



## Maintenance Free

Design reduces total cost of ownership



## High Precision

Zero backlash and high precision absolute encoder feedback, supporting Hiperface®, Hiperface DSL®, EnDat 2.2 and BiSS-C® protocols



## LiveDrive Design

Robust and innovative design simplifies machine operation and maintenance

## System Solutions

- Verified compatibility with standard industrial servo drives
- One cable technology with Hiperface DSL® for simplified machine design
- 90 deg and in-line field cables provide a complete drivetrain solution
- Custom engineered solutions



# Applications



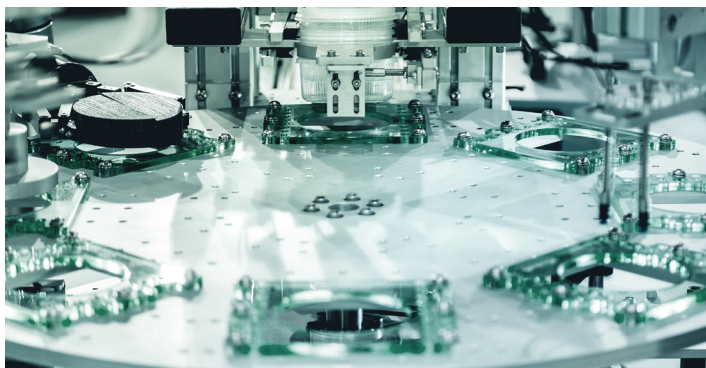
## Delta Robots

The worlds first and only direct drive Actuator designed for delta robots. The LiveDrive LDD series is redefining the standard for cleanliness, simplicity and productivity of delta robots.



## Precision Indexing

Simplify, increase precision, and reduce the footprint of indexing drivetrains by eliminating common inline or right angle gearboxes. Suitable for high precision and fast cycle times.



## Machine Automation

Eliminate gear backlash, lubrication and maintenance for in-process positioning equipment. Clean, precise, maintenance free positioning.



## Custom Solutions

Have another application for LiveDrive? Let us help you develop an innovative direct drive solution for your project.

### Industries



Food



Pharmaceutical



Electronics



Consumer Packaged Goods



Custom Solutions



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# Benefits

■ LiveDrive® Direct Drive Actuator LDD 1800 Series

## LiveDrive Redefines the Standard for Cleanliness, Simplicity and Productivity

Many machines today are powered by servo Actuators or systems of belts and pulleys. Gearboxes are large, heavy, and filled with oil, while belts and pulley systems take up space, wear over time, and are difficult to mount. LiveDrive LDD actuators simplify the drivetrain of any machine and deliver higher productivity.



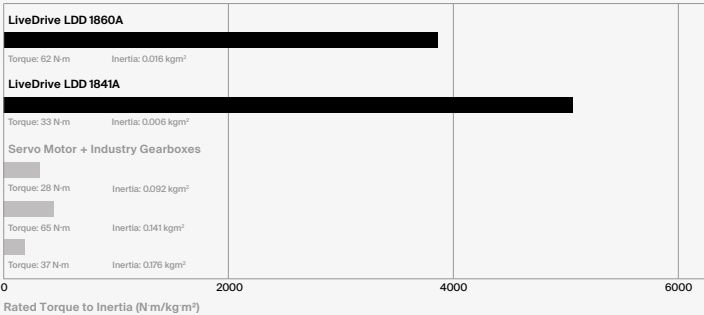
Compact Traditional Servo-Gearhead Drivetrain vs LiveDrive Direct Drive Actuator



Smaller Footprint Traditional Servo-Gearhead Drivetrain vs LiveDrive Direct Drive Actuator

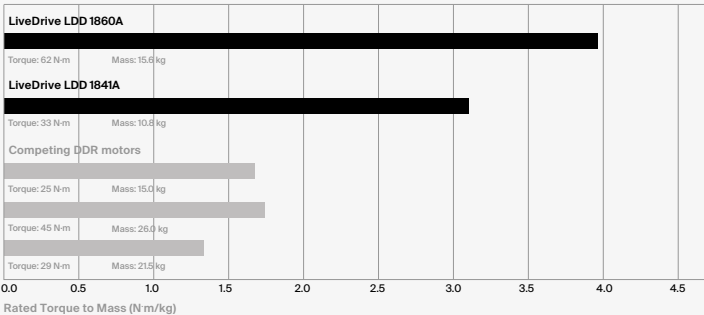
## Lower Inertia Higher Acceleration

Rated Torque  
to Inertia (N·m/kgm<sup>2</sup>)



## High Torque Density More Compact

Rated Torque  
to Mass (N·m/kg)





# Motion Redefined.

A KOCH ENGINEERED SOLUTIONS COMPANY



## Engineered for you.

**Genesis Robotics & Motion Technologies** specializes in engineered solutions designed specifically to your unique requirements.

Located in Vancouver, Canada, our mission is to deliver value to our customers by solving some of the most challenging robotics and automation problems in the world.

The Genesis team brings these core capabilities to each project:

- Advanced modeling and simulation tools to demonstrate the LiveDrive advantage in your applications.
- Innovative design and custom engineering for the most challenging applications.
- Strong commitment to building mutually successful relationship.

## Contact

[genesisrobotics.com](https://genesisrobotics.com)

[sales@genesisrobotics.com](mailto:sales@genesisrobotics.com)  
+1 604 800 1907