

# DESIGNING FOR MANUFACTURABILITY

Today's machine control systems that feature servo drives with built-in controllers deliver capabilities that can significantly enhance productivity in manufacturing environments.

A servo drive with an integrated and easy-to-use motion controller effectively replaces two devices with one. Their capabilities include Ethernet-based communication, online programming, simulation software and superior resistance to electro-magnetic interference (EMI).



Essentially such drives put the power into the OEM's hands enabling them to further differentiate their machine performance to satisfy the unique demands of their customers without the time and cost associated with vendor customized motion components. The result is that the overall cost of implementing and maintaining a machine control system as well as the investment payback time can be significantly reduced.

Kollmorgen AKD® BASIC and AKD® PDMM servo drives with built-in motion controllers deliver the high-performance that machine builders have come to expect from the [AKD family](#).



[AKD® BASIC](#) provides all the performance features from the AKD series, along with built-in machine and motion control that can be programmed in BASIC programming language from Kollmorgen's AKD WorkBench.

These drives can eliminate the need for a separate PLC or allow machine designers to customize drive functionality.



[AKD® PDMM](#) provides an integrated servo drive and automation controller.

It combines one AKD servo axis, a master controller that supports up to seven or more additional axes and the full automation capability of [Kollmorgen Automation Suite™](#) in a single, compact and scalable package.

AKD BASIC and AKD PDMM drives enable machine designers to build superior performing machines faster, and more cost effectively. Following is a general overview of their capabilities:

1. Ethernet-based communication enable the drives to report status and operation information to the controller, allowing it to modify drive operation as needed to keep the machine running at optimal levels. One example is the slowing down of the machine due to unexpected mechanical load problems while at the same time notifying the factory information system of the immediate need to perform machine repair or maintenance.
2. Superior resistance to electro-magnetic interference through smart circuit and package design enables these drives to be placed in more electrical and noisy factory environments without adverse operational effects.
3. Less time to replace parts due to online component configuration through the Ethernet-based interface.
4. Superior production rates through the use of higher performance internal processor and deterministic bus networks such as EtherCAT® enhance high speed control.
5. Contain web servers for easy access to operational information.

## ***SPECIFIC TO AKD PDMM***

6. With online programming, changes to the machine's operational program can be made without stopping the machine, keeping the factory running while machine improvements are made.
7. During development, simulation software can be used to test machine code, reducing the amount of time the machine is on the factory floor prior to being placed in production.
8. The ability to program in one of multiple standard languages (IEC 61131-3 standards), one of which most users are likely to be familiar, helps reduce development time.

## ABOUT KOLLMORGEN

Kollmorgen is a leading provider of motion systems and components for machine builders around the globe, with over 70 years of motion control design and application expertise.

Through world-class knowledge in motion, industry-leading quality and deep expertise in linking and integrating standard and custom products, Kollmorgen delivers breakthrough solutions unmatched in performance, reliability and ease-of-use, giving machine builders an irrefutable marketplace advantage.

For more information visit [www.kollmorgen.com](http://www.kollmorgen.com), email [support@kollmorgen.com](mailto:support@kollmorgen.com) or call 1-540-633-3534.