Randy Stott, Managing Editor

Smarter Machines Need Smarter Components

In this issue's feature article on motion control (p. 16), Senior Editor Matthew Jaster explores some of the leading trends in our industry. The article begins with this simple phrase: "The future of motion control is connectivity."

That about sums it up. Whether you call it Industry 4.0, the Industrial Internet of Things (IIoT) or just plain modern technology, there's no doubt that there's a revolution underway, and it affects just about everything we do.

Dumb components are no longer good enough. They have to talk to their counterparts. They have to talk to us. And we have to listen—which means, in addition to wired components, we also need better, more capable control systems, software and interfaces to enable engineers to make the best use of them.

And all you have to do is flip through the pages of this magazine to see not only that the components, controls and systems are already a big part of industry, but also that they continue to change. Even more importantly, it's clear that the change isn't over. The revolution will continue.

For even more evidence, look no further than our *2018 Engineering Showcase* section (p. 48), where we've highlighted a number of the companies leading the charge.

This issue also features a great case study from Framo Morat and Dunkermotoren (p. 26), who give us a glimpse of the factory of the future with their contribution to the technology of automatic guided vehicles, which seem almost like they should be racing down corridors in front of Darth Vader.

In addition to the cutting edge, we always try to give you a sampling of basics and technical articles on a variety of subjects. In this issue's Baldor Motor Basics, motor guru Edward Cowern wraps up his discussion on hazardous motors and also covers DC drive fundamentals. If you're new to electric motors, or even if you just need a refresher course, the Baldor Basics series is a treasure trove of information. (Baldor Basics began in December 2016 issue and has run continuously since then).

For our coverage of medical devices, Associate Editor Alex Cannella describes how the MedAccred accreditation program has continued to grow, taking on greater significance to suppliers in the medical industry. See his article on page 22.

Continuing the medical theme, we also have a detailed technical article from Bühler Motor about the development of miniature plastic gears for medical devices.(page 36).

We round out the technical content with an in-depth article about a new calculation method for evaluating the efficiency of worm gears.

We are always looking for new contributors, so if you have stories to share, especially as they relate to the continued changing of the technology that affects our industry, please consider sending those stories to us. Send your ideas via e-mail to *wrs@powertransmission.com*.

As always, we hope you find our articles interesting, educational and helpful in your quest to build smarter machines.