

The *Journal* is celebrating a 25-year milestone in 2019 and reflecting on how far the industry has come since the birth of the magazine. This new column is dedicated to showcasing the growth of fluid power technology. Each article features a product or industry analysis and how it has transformed from its early years. If you have a product or analysis to share with the *Journal* readers, please contact Candace Nicholson at cnicholson@fluidpowerjournal.com.

1994-2019: 25 Years of Innovation

By **Cindy Cookson**, Director, Global Product Line – Hydraulics, Gates Corporation

» **THE GATES CORPORATION** was founded 108 years ago in 1911, and today, it is a global manufacturer of innovative, highly engineered power transmission and fluid power solutions. The hydraulic hose is just one product in Gates' broad portfolio of industrial solutions, which are sold in 128 countries for diverse channels and applications. Hydraulic hoses are a critical component of machinery and equipment in industries with demanding performance requirements such as agriculture, construction, forestry, mining, and more.

The G2 hose, a stalwart of the Gates Hydraulics portfolio for decades, was designed for use

in high-pressure hydraulic lines in applications across agriculture, energy, transportation, and other demanding industries, and met the historic SAE 100R2 specification. Building on the company's expertise in materials science, the M2T hose was launched in the 1990s as a compact alternative to G2. M2T set a new standard for wire braid performance by using novel wire reinforcement designs to achieve high pressure performance in a smaller package. Since there was no formal industry standard at the time for this new compact hose construction, Gates collaborated with industry partners and the Society of Automotive Engineers to formalize

such a standard, and the SAE 100R16 specification was published in 1994.

Since then, mobile fluid power applications have become more complicated as power output requirements on these systems have increased. At the same time, the available space in engine compartments has shrunk for a number of reasons: industry regulations have limited the overall space available; both environmental considerations and performance needs have driven the introduction of more systems; and added system features like emissions controls, hydrostatic drive lines, and climate control systems compete for space in the drive



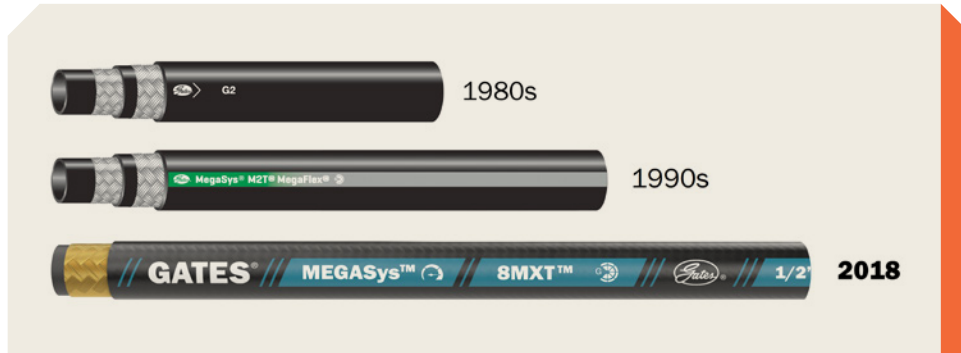
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compartment. These factors have led to more systems that require advanced technology, while also introducing increased complexity in a smaller space, all of which has driven Gates to further innovate its hose products throughout the last 25 years.

Gates introduced its next generation of premium hydraulics in 2018 with the Gates MegaSys™ MXT™ family of hoses that set a new standard for modern fluid power systems. MXT is a shining example of Gates' commitment to innovation, leveraging technology and materials science to push boundaries and solve problems for customers. Where M2T was a more compact version of G2, MXT is a more compact version of M2T, solving customer challenges such as space constraints, challenging hose routing issues, and system weight. The patent-pending innovations that enable MXT include breakthrough design models for the hose reinforcement that enable wire reinforcements to work more efficiently. MXT also



leverages modern materials to meet or exceed a wide range of global industry standards. It is fully compliant with SAE 100R16, and also performs at other SAE, EN, and ISO standards to cover 90% of wire braid hydraulic applications.

MXT weighs up to 30% less, which improves fuel efficiency, allows for easier handling, and reduces shipping costs. MXT was also tested to exceed 600,000 impulse cycles — three times greater than industry standards. Additionally, it is 40% more flexible than legacy Gates products like G2 and M2T, which reduces the speed of installation because the hoses are easier to route — a benefit that also improves ergonomics for installation technicians.

Gates as an organization has also changed during the last 25 years. Gates' materials science expertise has evolved its portfolio far beyond rubber compounds and have led to increased product performance. Additionally, innovations in manufacturing processes deliver reliable products that meet evolving market needs with a global manufacturing footprint.

Gates continues to accelerate the next 25 years of fluid power growth with innovations that address the needs of evolving systems. From performance upgrades to operations improvements to green technologies, Gates is driven by possibility. ●

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