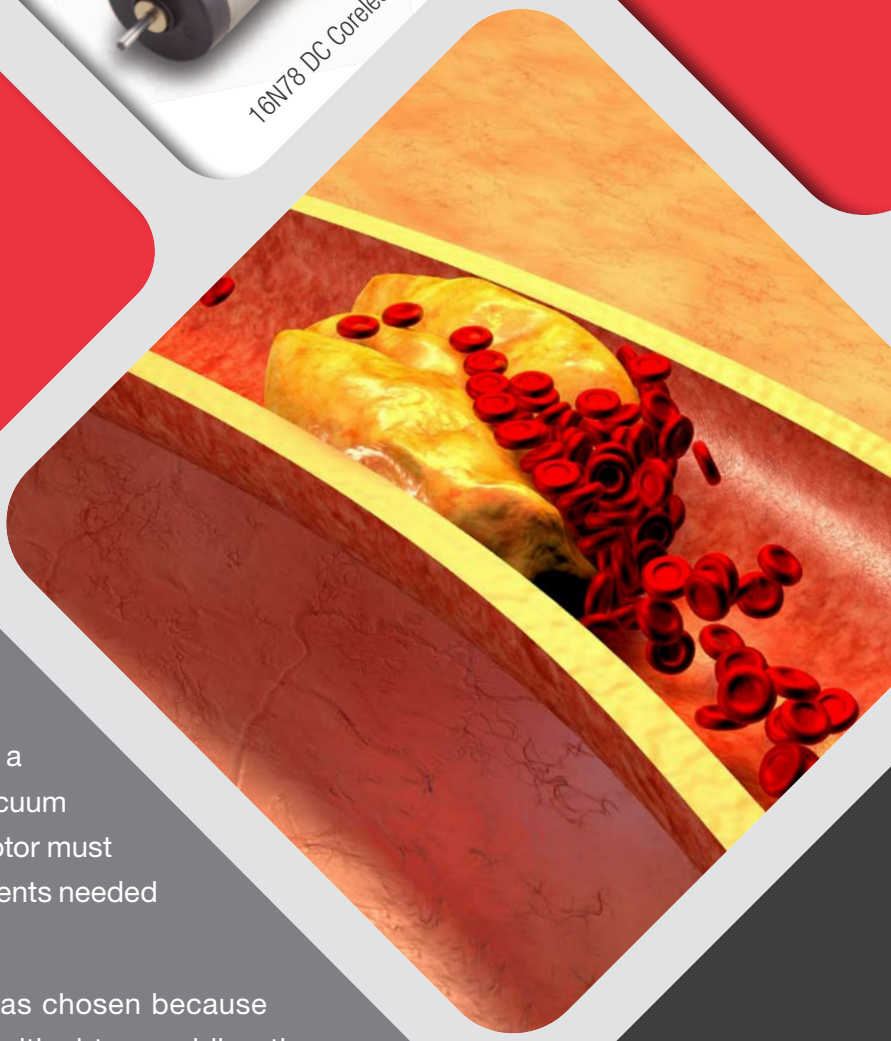
APPLICATION PROFILE

MECHANICAL THROMBECTOMY - CLOT REMOVAL DEVICE



A leading manufacturer of mechanical thrombectomy devices needed a high-speed DC motor to power a new device to remove clots in the brain. Since brain clots can be fatal, motor precision and reliability are key to the optimal outcome for the patient. To remove a clot, the device first spins a wire at high speed to break up the clot, then vacuum aspirates it out of the bloodstream. The device motor must operate at speeds based on the specific requirements needed to remove the individual clot.

Portescap's 16N78 brush DC coreless motor was chosen because it can run efficiently at high speeds, which is critical to providing the proper wire rotation needed to quickly break up the clot. The high efficiency of the coreless motor enables the 16N78 to operate at low voltages to minimize battery size. A smaller battery reduces the handpiece footprint to improve the ergonomics for the operator. High-power motor density ensures adequate torque production throughout the procedure.

The 16N78's speed and power, coupled with the reliability of a Portescap design, enabled the manufacturer to produce an efficient and lightweight device that successfully meet the critical requirements of the thrombectomy procedure.

Motor Highlights

- Ironless construction
- Neodymium magnet for high performance
- High power density package
- Precious metal commutation
- Compact Brush DC motor design
- REE windings to reduce electro erosion

Application Assistance
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