Switching from Allen-Bradley VFDs: Alternatives, Cost Savings & Precision Electric Services

Note: In this article, "AB" refers to **Allen-Bradley** (the Rockwell Automation brand of drives), not to be confused with the manufacturer **ABB**.

Introduction: Why Consider Alternatives to Allen-Bradley VFDs?

Allen-Bradley (AB) PowerFlex variable frequency drives (VFDs) are widely used in industrial motor control. They're known for quality and seamless integration with Rockwell PLC systems. However, many users eventually seek alternatives due to several pain points. **Cost is a major factor** – AB drives tend to carry a hefty price premium. In fact, industry forums joke that *"You can buy better, but you can't pay more"* when it comes to Rockwell's pricing【15†source】. One engineer noted you can often *"buy two ABB or Schneider VFDs for the price of one Allen-Bradley drive"*【4†source】. Additionally, **support and maintenance** can be frustrating with AB drives. Users report needing expensive support contracts just to get basic assistance【49†source】. Lead times for new AB units have also been problematic – during recent supply chain crises, some Allen-Bradley drives were quoting **60-week delivery** times【18†source】, forcing companies to consider other brands to avoid extended downtime.

Given these challenges, switching to an alternative VFD brand can significantly **reduce costs and lead times** while still meeting technical requirements. Many top-tier drive manufacturers offer products that match or exceed Allen-Bradley's features and reliability – often at lower cost and with more accessible support. Moreover, modern drives from other brands support the same industry standards (UL, CE, etc.) and communication protocols (EtherNet/IP, Modbus, etc.), so they can integrate into existing systems without a total overhaul. The sections below explore popular AB VFD models and equivalent replacements from other manufacturers, the benefits of making a switch (especially cost savings), and how Precision Electric can facilitate the transition or provide repairs.

Cost Savings and Support Benefits of Switching

Cost Savings: The most immediate benefit of moving away from AB VFDs is the lower price point of competitor drives. Many alternative drives are 30–50% cheaper for comparable power ratings and features. For example, ABB and Schneider Electric offer VFD models at roughly half the cost of an equivalent Allen-Bradley unit【4†source】. Some brands like WEG or AutomationDirect's offerings can be a fraction of the cost (one forum user noted WEG drives are *"like 1/4 the cost"* of AB【15†source】). Over a fleet of drives, these savings add up significantly. Lower upfront cost isn't the only factor – **spare parts and expansion options** also tend to be cheaper from non-AB vendors, further reducing lifecycle expenses.

Support & Availability: Outside the Rockwell ecosystem, many drives come with free technical support and don't require paid contracts for firmware or phone support. This has been a sore point for AB users – Precision Electric observes that customers often become *"frustrated when they have to sign an expensive*

contract to get support" for Allen-Bradley products【49†source】. In contrast, companies like ABB and Yaskawa typically include extensive support and documentation at no extra charge. Additionally, alternative brands saw **better availability** during recent chip shortages. While AB quoted lead times over a year for some models in 2022, competitors were often able to deliver drives in weeks【18†source】. One industrial user shared that when faced with year-long delays for AB drives, their company *"evaluated other drives they otherwise never would have considered"* to keep the project on schedule【18†source】. In short, switching can mean quicker access to equipment and less downtime waiting for replacements.

Integration and Features: Modern VFD alternatives are designed to drop into existing control systems with minimal hassle. Most support **industry-standard networks and I/O**. For instance, Parker SSD (a drive line Precision Electric often recommends) supports **EtherNet/IP**, Profibus, CANopen, EtherCAT, Modbus and other common fieldbus protocols for PLC communication【49†source】 – meaning you can still use an Allen-Bradley PLC (Logix) to control a non-AB drive over Ethernet/IP or other interfaces. Features like safe torque off (STO), vector control, dynamic braking, and built-in filters are available across major brands. In many cases, alternative drives offer comparable performance – **and sometimes better reliability**. Seasoned engineers frequently rank brands like **Yaskawa and ABB above Allen-Bradley** for drive longevity and performance【15†source】. Users report that top alternatives have *"rock-solid reliability"* and can run for years without issues【4†source】. All leading drive manufacturers design to meet international standards (UL, cUL, CE, IEC/EN 61800, etc.), so safety and code compliance remain equivalent to AB.

Popular Allen-Bradley VFD Models and Replacement Options

If you're using a specific Allen-Bradley drive series, chances are there is a direct replacement from another manufacturer that offers similar specs at a lower cost. Below are some **popular AB VFD models** and recommended alternative solutions:

- **Allen-Bradley PowerFlex 525 (Component-Class Compact Drive, 0.5–30 HP):** The PowerFlex 525 is a common microdrive for pumps, fans, conveyors and general-purpose use. Equivalents include the **ABB ACS580** or ACS480 series for general-purpose drives in the 0.75–30 HP range, which feature vector control and built-in filters similar to the PF525. **Yaskawa's GA500** series (1/8–40 HP) is another strong alternative – *a modern compact VFD known for its ease of setup and built-in features*. Users find the GA500 *"super easy to set up, very reliable, [and] reasonably priced"*【4†source】. Other replacements in this class are the **Eaton PowerXL DM1** micro drive and **Lenze i500** series, both offering compact form factors and flexible connectivity. **Hitachi WJ200** drives (and the newer Hitachi WJ1 series) also cover fractional to 20+ HP with sensorless vector performance, often at a lower price point than Rockwell. All of these options have versions with common communication options (Modbus RTU/TCP standard, and optional EtherNet/IP or PROFIBUS modules) to integrate into existing systems.

- **Allen-Bradley PowerFlex 753/755 (Architecture-Class Drives, up to 350+ HP):** The PowerFlex 750-series are high-performance AC drives used in demanding applications (e.g. heavy conveyors, mixers, extruders). For an alternative, **ABB's ACS880** series is a direct counterpart – it spans from about 1 HP up to 6000 kW (8000 HP) in various configurations【44†source】, covering both the low-voltage high-power range and even medium voltage. ABB ACS880 drives offer advanced vector control (including ABB's notable Direct Torque Control), functional safety (STO, safe speed) and a wide range of built-in options similar to Allen-Bradley's features. **Yaskawa GA800** drives (which

succeed the well-proven Yaskawa A1000 line) cover roughly 1–600 HP and are known for very high reliability in industrial service – many users report Yaskawa medium-voltage drives "just keep trucking" even in harsh conditions where others fail【15†source】. Other competitors in this class include **Siemens SINAMICS G120/S150** drives and **Schneider Altivar 71/Process** drives, which are also often 30–40% less expensive than PowerFlex for comparable ratings (Schneider and ABB drives have been purchased *"two for the price of one"* AB drive in some cases【4†source】). **Danfoss VLT** series could be mentioned here as well – Danfoss drives are known for strong performance in HVAC and heavy industry and are a common retrofit for aging AB units. Eaton's offering for higher horsepower is the **PowerXL DG1** general-purpose drive (available up to ~600 HP) and the legacy **SVX/SPX9000** series (originally by Cutler-Hammer). These provide similar high-power capabilities with features like active front-end (low harmonics) or regeneration units as alternatives to Rockwell's specialized options.

- **Allen-Bradley PowerFlex 40 & 4-Series (Legacy Micro Drives):** Many plants still have older PowerFlex 40, 4M, or even ancient Bulletin 1305/1336 drives in service. For the smaller PF40 (up to 5–10 HP) and PowerFlex 4 class (0.5–5 HP), alternatives abound: **AutomationDirect's DURApulse/GS series** (which are actually rebranded Delta Electronics drives) are extremely cost-effective drop-in replacements – notably, the AB PowerFlex 4 was itself essentially a rebranded Delta design【4†source】. Other sub-10HP options include **WEG CFW-series** micro drives, **TECO-Westinghouse** and **Fuji Electric** minis, all of which can perform basic V/Hz or simple vector control for a fraction of AB's cost. For an older AB PowerFlex or 1336 that is discontinued, upgrading to a new ABB, Yaskawa, or Eaton drive can be more economical than finding surplus AB parts. (For example, the Allen-Bradley 1336 series was long ago phased out, and **third-party rebuilders** often keep those running by replacing blown components【11†source】 – but a new drive from another brand may offer better efficiency and support.) Replacing a legacy AB drive with a modern alternative also yields energy savings and improved diagnostics in many cases; even without changing the motor, new VFDs often have better efficiency at partial loads and more sophisticated motor protection.

Yaskawa's GA500 series general-purpose drive (shown) is a compact, easy-to-use alternative for small to mid-size Allen-Bradley VFDs. The GA500 and similar drives from ABB, Eaton, Lenze, etc., provide advanced control modes, network connectivity (Modbus, EtherNet/IP, etc.), and safety features at a lower price point.

Leading VFD Manufacturers to Consider

When moving away from Allen-Bradley, it helps to know the **major VFD brands** and their strengths. Precision Electric carries or has experience with most leading manufacturers. Here's an overview of the key players that can serve as AB alternatives:

- **ABB:** A global leader in drives, ABB offers the "**ACS**" series of AC drives covering micro to medium-voltage. ABB drives are *"globally recognized for their stable performance and excellent combination of features"*, including high overload capacity and very good low-speed torque control【7†source】. For general industry, the **ACS580** (low-voltage general purpose) and **ACS880** (industrial high-performance) families are popular. ABB emphasizes ease of use – their standard drives have common programming tools, universal options, and built-in interfaces. They also typically have broad support for fieldbus/industrial Ethernet communication out of the box, making integration straightforward. ABB drives have a reputation for robustness; one user reported an ABB installation running **10+ years with no failures** in a harsh environment【15†source】. Another benefit is ABB's

global service network – they offer programs like a 24-hour exchange service for failed units【10†source】 to minimize downtime. In terms of cost, ABB is generally 20-30% less expensive than Rockwell for similar drives, delivering a compelling value proposition with no sacrifice in quality.

- **Yaskawa:** A Japanese manufacturer, Yaskawa is often cited as the gold standard in VFD reliability. Many in the industry rank **Yaskawa's drives at the top for dependability**【15†source】. The current mainstream products are the **GA500** (microdrive up to 30–40 HP) and **GA800** (high-power up to ~600 HP) series, which replaced the well-known V1000 and A1000 lines. Yaskawa drives are known for being very **user-friendly** – they have intuitive keypad menus and PC software, and even mobile apps for setup. Features like parameter cloning via removable memory, and smart auto-tuning for motors, make commissioning quick. Yaskawa also builds in support for popular networks; for example, the GA500 can have an EtherNet/IP or PROFINET option card, and even without it, the drive supports Modbus RTU as standard. One integrator quipped that Yaskawa drives are "basically indestructible" in the field【4†source】. They tend to tolerate overloads and tough conditions gracefully, which is one reason Yaskawa is commonly used in heavy industries (metal, mining, oil & gas) where downtime is costly. Cost-wise, Yaskawa is competitive – typically cheaper than AB, roughly on par with ABB. The **initial cost plus the long service life** yields a low total cost of ownership.

- **Eaton (Cutler-Hammer):** Eaton's drives, such as the **PowerXL series**, are solid alternatives especially in North America. The **Eaton DG1** general-purpose VFD covers 1–500 HP with advanced features (active energy control for efficiency, dual ratings for normal or heavy duty, etc.), and the **Eaton DM1** serves the microdrive segment. Eaton also offers the **H-Max** and **HVX9000** drives tailored for HVAC applications (fans and pumps) – these can replace AB's fan/pump specific models with ease, often bringing built-in PID controllers and bypass options. While Eaton's brand is not as globally recognized as ABB or Yaskawa in drives, their products stem from the acquisition of legacy European designs (the 9000 series was originally by Vacon/Danfoss). Users often find Eaton drives to be user-friendly with a decent PC tool and good documentation. Importantly, **cost is a strong suit** – Eaton drives are frequently lower in price than AB, and the company has good distributor availability in the US. If you need quick delivery from a local supplier, Eaton might be a good choice. They also maintain UL, CE compliance and support protocols like EtherNet/IP (via add-on cards in many models) and BACnet or MODBUS for building automation.

- **Lenze (AC Tech):** Lenze, a German manufacturer, produces a range of compact drives that are popular in both the EU and US, especially for small and mid-size motors. Precision Electric has experience with **Lenze/AC Tech** drives – for instance, the **SMVector** series was a common replacement for PowerFlex 4/40 drives. The newer **Lenze i500** series now offers a modular design with plug-in option cards for communications and I/O, making them flexible for OEMs and retrofits. Lenze drives are known for their simplicity and are quite cost-effective. They might not have all the high-end bells and whistles of an Allen-Bradley 755, but for standard V/Hz or simple vector control needs, they get the job done reliably. One thing to note: some users find Lenze's documentation a bit difficult to navigate【15†source】, but once configured, the drives run well. Lenze has strong niche usage in packaging machinery and machine tools. These drives typically support EtherNet/IP, CANopen, EtherCAT, etc. via modules, allowing integration into integrated systems (for example, a Lenze drive can be controlled by a Rockwell PLC over EtherNet/IP just like a PowerFlex, once the option card is installed). **Cost**: Lenze's pricing is usually well below AB – their small drives often come

in at almost **half the price** of a comparable PowerFlex, while offering competitive performance for most applications.

- **Hitachi:** Hitachi has produced drives for decades and is another viable alternative, especially in the small-to-medium power range. Their **WJ200 series** was a popular general-purpose drive (ranging roughly 0.5 to 20 HP) known for being a compact "workhorse" with sensorless vector capability and easy setup. Hitachi recently introduced successors like the WJ**1** (as the WJ200 is being phased out) and the higher-performance **SJ series** (e.g. SJ700, SJ-P1) for larger horsepower or more dynamic applications. Hitachi VFDs come standard with features like built-in EMC filters and simple PLC functionality (e.g. programmable relays, PID loops), giving a lot of value for the money. They also typically include both analog and digital I/O on board, and support Modbus communications out of the box (some models even come with Ethernet or USB programming interfaces standard). In terms of **cost**, Hitachi drives are very attractive – they often undercut Allen-Bradley significantly. For example, a 10 HP Hitachi might cost 30% less than a PowerFlex 525 of the same rating. Hitachi does not have the same domestic support network as Rockwell in the US, but authorized distributors and third parties like Precision Electric can provide service. Many OEMs use Hitachi drives in their equipment because of the cost/performance balance. If you need to replace a smaller AB drive, a Hitachi WJ-series could be a quick drop-in (the parameter sets even have some equivalent nomenclature to ABB/AB standards, making it a smoother learning curve).

- **Parker SSD (Eurotherm):** Parker Hannifin's SSD drive line (formerly Eurotherm drives) deserves mention as well, especially since **Precision Electric has been a systems integrator and certified repair center for Parker drives since 1996【49†source】**. Parker SSD offers a wide range from basic AC drives to high-performance servo drives. They might not be as ubiquitous as ABB or Yaskawa, but Parker drives have a strong presence in certain industries (plastics, printing, and materials handling) and are known for their robust design. For example, the Parker AC30 series can serve as an alternative to a PowerFlex 70/700 in many cases. One advantage with Parker is the level of customization – they provide "thousands of standard configurations" and even **custom-engineered drive systems** for OEMs【49†source】. If you have a very specific application that AB drives struggled with, Parker might have a niche solution. They also carry all major approvals (UL, CE) and, as cited earlier, support all the key fieldbuses (EtherNet/IP, PROFINET, CANopen, etc. all available)【49†source】. In terms of cost, Parker drives are generally competitive with other non-AB brands (often a bit more expensive than mass-market ABB/Danfoss, but still less than Allen-Bradley). Considering Precision Electric's long relationship with Parker, they can assist customers in migrating to Parker drives seamlessly, including transferring drive parameters and tuning the new drives to match the old performance.

Precision Electric's VFD Services: Repairs and Retrofits

Making a switch from Allen-Bradley to a new drive may sound daunting, but **Precision Electric, Inc.** specializes in making this process smooth. As a veteran industrial electronics service (serving industry since 1983), Precision Electric offers both **repair services for Allen-Bradley VFDs** and **turn-key retrofit solutions** to alternative drives:

- **Expert Repair of Allen-Bradley Drives:** If you have a failed AB PowerFlex drive, Precision Electric can troubleshoot and fix it to get you back up and running. They perform **over 99% of VFD repairs in-house**, which ensures a prompt turnaround【10†source】. This is crucial because sending a drive

back to the OEM (Rockwell) can sometimes take weeks, whereas a focused independent repair shop often turns repairs around in days【10†source】. Precision Electric's technicians are experienced with common Allen-Bradley failure modes – whether it's a blown power transistor module, a fried input rectifier, or a fault code that won't clear, they've likely seen it. Every repaired drive is fully tested under load before returning to you. **Emergency repair service** is available for critical breakdowns; while true "same-day" fix may not always be feasible (complex repairs require testing time and sometimes parts sourcing), **expedited 1-3 day repair** options are offered to minimize your downtime【10†source】. All repair work comes with a warranty (Precision Electric provides a 12-month in-service warranty on repairs), giving you confidence in the restored drive.

- **Retrofit and Replacement Services:** In many cases, repairing an old drive can be a stop-gap solution, and a long-term fix is to **replace an unreliable or obsolete Allen-Bradley unit with a new alternative drive**. Precision Electric assists customers in selecting and implementing the right replacement. They will evaluate your application's requirements (motor HP, voltage, control scheme, enclosure rating, etc.) and recommend a drop-in replacement from brands like ABB, Yaskawa, Eaton, Lenze, Parker, and others that they supply. The goal is to match or improve the functionality you had with the AB drive. Thanks to standardization in the VFD world, retrofitting is often straightforward: for example, a Precision Electric engineer can help program the new drive with equivalent parameters (acceleration profiles, max frequency, PID setpoints, I/O logic) so that your process continues as before or better. They can also provide **panel modification and installation** if the new drive has a different form factor. This end-to-end support is extremely helpful for plant maintenance teams that may not have the bandwidth to re-engineer a drive setup. Additionally, **Precision Electric keeps a stock of common VFD models** – or can fast-track ordering – meaning you could get a replacement drive shipped far faster than waiting for an AB factory order. In urgent scenarios, they might even provide a **temporary rental drive or a bypass solution** to keep you running while repairs or swaps are in progress.

- **Emergency Response and Technical Support:** If your Allen-Bradley drive has failed at 3 AM or during a critical production run, Precision Electric offers on-call support to guide you. Often, their experts can help diagnose whether the issue is the drive or something external, and advise immediate steps. If a drive needs to be overnight shipped or expedited for repair, they facilitate that process quickly (their website even allows you to generate a **free repair quote and packing slip** immediately【49†source】). The combination of being able to both fix drives and furnish alternatives puts Precision Electric in a unique position – they're not tied to pushing a single brand solution. Instead, they will work with whatever option gets your facility back up with **minimal downtime and cost**. This might even include **temporary fixes** like using one of your less critical drive units as a makeshift replacement in a pinch, while they repair or source a new drive for the primary line.

Conclusion

Switching from an Allen-Bradley VFD to an alternative brand can deliver substantial benefits – most notably **cost savings**, but also improved availability, strong support, and equal (if not better) performance and reliability. Allen-Bradley drives will certainly remain common in industry, but they are no longer the only premium option. Manufacturers like ABB, Yaskawa, Eaton, Lenze, Hitachi, Parker, and others have **mature, field-proven VFD products** that can directly replace AB's PowerFlex series in virtually any application. By exploring these alternatives, companies often find they can **cut capital costs** and avoid vendor lock-in

without sacrificing quality or features. The key to a successful transition is planning and support – and that's where partners like Precision Electric come in.

Precision Electric has decades of expertise in both **Allen-Bradley drives and the full landscape of VFD alternatives**. They can advise which drive best fits your needs (be it a pump control, a high-torque extruder, a multi-motor conveyor, etc.), handle the retrofitting logistics, and provide ongoing support post-installation. And if you choose to stick with your Allen-Bradley units, Precision Electric's repair team is there as a safety net to refurbish and rejuvenate those drives when failures occur, offering a faster turnaround than OEM service in most cases.

In summary, you are not locked into high prices and contracts if you have AB drives. There are **many options to upgrade or replace** those VFDs with equal functionality at a lower cost. Whether your goal is to reduce spare parts cost, eliminate long lead times, or solve a support headache, it's worth evaluating the alternatives. With the **significant cost savings** reported (users routinely see 20–50% cost reduction by switching【4†source】) and the robust capabilities of today's non-AB drives, making the switch can boost your bottom line and system reliability. Consider reaching out to experts like Precision Electric to chart the best path forward – you may be pleasantly surprised at how seamless and beneficial a change of drives can be.

References:

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