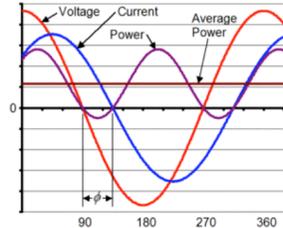


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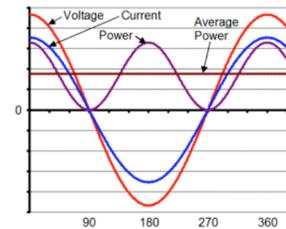
Energy Savings - AC Inverters Versus DC Drives Power Factor

One big advantage of an AC inverter's design is that their capacitors act as form of built-in [power factor](#) correction. AC inverters with their respective induction motors typically have a power factor of about 0.92-0.95. A noteworthy characteristic of an AC inverter is that its power factor remains consistent throughout the motor's speed range. Conversely, a DC SCR drive's power factor is approximately 0.85 running at base motor speed and declines proportionally as motor speed decreases. For customers that pay penalties for power factor, changing to AC drives can offer significant utility savings. This is especially evident for motors that run at slower than base speed and have heavy loading like extruder or test rig applications. Call us for a detailed spreadsheet that we can apply to your specific application to show your firm's energy saving potential.



Regenerative AC Drives With 1.0 Power Factor and Negligible Harmonics

AC Drives normally dissipate braking energy by using dynamic braking resistors. However, there are applications where a motor needs to continuously hold back (i.e. unwinds, cranes, centrifuges, windmills, dynamometers, etc.) or is being mechanically overhauled (i.e. nip sections on web lines where the web tension gradients between adjacent sections make one section want to pull faster than the setpoint of the drive). There are several solutions for these types of regenerative AC drive applications. You can oversize each AC drive's DB resistors and the braking module to allow for a continuous "burn" of regenerative energy. Alternately, you can put drives on a common DC bus where the overall system shares the line's energy, providing the net sum of the total bus loading of all the driven sections is motoring. However, there is a clean, energy efficient method to regenerate an AC drive's braking power directly back into the lines as required. Parker SSD Drives has developed an Active Front End (AFE) product designed by application to provide:



- 1.0 power factor without the need for any power factor correction equipment
- Elimination of typical drive harmonics and meets IEEE519 specification for total harmonic distortion less than below 4%. (Typical issues associated with plant harmonics are malfunctioning of microprocessor-based equipment; overheating in neutral conductors, transformers, or induction motors; deterioration or failure of power factor correction capacitors; erratic operation of breakers and relays; pronounced magnetic fields near transformers and switchgear.)
- Send regenerative power directly back to line for best system energy efficiency
- Eliminate each drive section's DB Resistors and Line Reactors

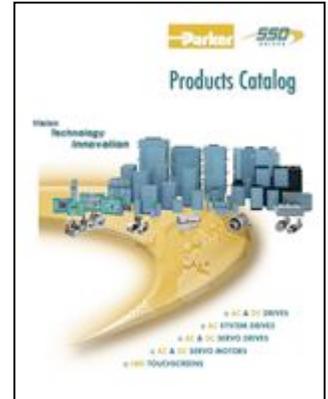
Call us to discuss your AC drive application. We will be happy to assist you in helping you to decide on the best choice for clean, regenerative AC drive power!

Parker SSD Products Catalog and Pricing

The Parker SSD Drives Online Product Catalog has information on AC and DC drives, AC inverters, software, the LINK network and more. Use the link below to view (left click) or download (right mouse click and "Save Target As") the complete product catalog in electronic format.

[Click here to view/download SSD Drives PDF Catalog \(1364k\)](#)

For complete Word or Excel compatible Price Lists for Parker SSD Drives please "Contact Us" directly. We are interested in learning more about your firm so we can provide you with the most appropriate sales and service channel for SSD products in your area.



Parker SSD On-Line Resource Center

Become a free member of Parker SSD Drives On-Line Resource Center. Simply complete registration at:

http://www.ssddrives.com/usa/Members/Rc_main_l3.php

Once registered you can receive valuable information such as:

- Manuals for all Parker SSD products
- Software downloads and free updates
- Application notes to better assist you in applying product software
- Product Bulletins that give latest technical announcements



Spreadsheet For Calculating Unwind and Winder Motor HP

Contact us to assist you in sizing your next center winder or unwind horsepower. We have a detailed spreadsheet developed by SSD's most expert engineers that assists you in estimating motor horsepower requirements for winders and unwinds. This spreadsheet takes into account such items as material tension, line acceleration and deceleration rates, roll inertias, roll weights, constant torque/constant horsepower operation, roll build-ups or build-downs, taper-tension operation, and gear ratios, to assist you in specifying the most appropriate motor power size for your next unwind or winder application.

