

# Regenerative Drive Upgrades

## Returning energy. Improving performance.



Schindler VF155 PF1 drive

Regenerative drives return energy back to your building's power grid to be used for other power needs in your building. Essentially it's like spinning your electric meter backwards. Schindler can provide regenerative drive technology to substantially improve the energy efficiency of your elevator system, whether your building has geared or gearless traction equipment.

### Benefits of regenerative drives

- Less net power usage means lower monthly utility bills
- Reduced heat generation means reduced cooling requirements in the elevator machine room. Heat generation can be reduced up to 50% depending on size of equipment
- Possibility of rebates from government sponsored and local utility programs
- Potential to earn points toward LEED® certification for existing buildings.

LEED is a registered trademark of the U.S. Green Building Council.

### Even better performance with regenerative Power Factor 1 (PF1) drives

PF1 drives provide low harmonic distortion and increase the effective power returned to the power grid. They are available on both AC and DC applications.

Schindler manufactures and applies its own PF1 drive systems for AC applications and has partnered with Magnetek to develop a true digital serial interface from our control system to the Magnetek Quattro DC PF1 drive.

### Comparison of applications

DC gearless machines		AC geared machines	
Drive technology	Energy savings	Drive technology	Energy savings
Motor Generators*		Brake Resistor*	
SCR	Up to 20%	Power Factor 1	Up to 25%
Power Factor 1	Up to 40%		

\* Baseline.

KT  
Kits

AC  
Accessories

CW  
Counter-weights

SA  
Safeties

FI  
Fixtures

CA  
Cars

DO  
Doors

MM  
Mechanical material

CO  
Controls

DR  
Drives



**Schindler**

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### PF1 solutions — AC applications



Schindler VF88 PF1

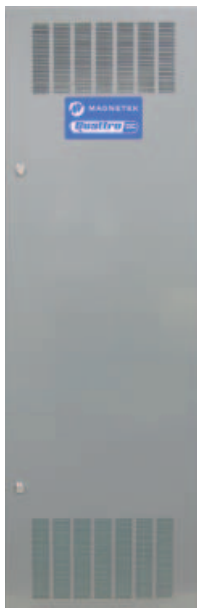
Schindler's PF1 compact, energy-efficient drive is available for AC geared and gearless configurations.

#### Features

- Low energy consumption, low starting current
- Minimises heat dissipation; brake resistors are not required
- Installation of reactive current compensation not needed
- Fully regenerative drive system
- Near unity power factor
- Maximum mains compatibility
- Available in several sizes.

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### PF1 solutions — DC applications



Magnetek Quattro™

Magnetek's Quattro DC elevator drive offers proven energy savings, lower installation costs and superior ride quality.

#### Features

- Saves up to 25% more energy over DC-SCR drives and 45% over motor generator sets
- Near unity power factor of over 0.95
- Clean utility side drive harmonics mean reduced heating
- Simplified installation; no isolation transformer or ripple filter required
- Multiple input voltage ranges, 200-480 VAC, 50/60 Hz
- CSA certified
- Available in several sizes.

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For further information including location of the Schindler office nearest you, please visit:

[www.schindler.co.nz](http://www.schindler.co.nz)

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