

AC LINE REGENERATIVE SYSTEMS

IMPULSE®•D+, IMPULSE®•D+ HHP,
& IMPULSE®•R

Magnetek's high performance AC Line Regenerative Systems are ideal for adjustable speed applications that include a high demand braking cycle. These industrial grade units take surplus regenerative energy from the motor and return it to the AC power source, reducing total energy consumption and improving energy efficiency.

AC REGENERATIVE SYSTEMS ARE AN IDEAL SOLUTION FOR

- High duty cycle cranes
- Large cranes with multiple resistor banks for each motion
- Severe duty, dusty, wet, or volatile environments

AC REGENERATIVE SYSTEMS PROVIDE

- Energy efficiency
- Cost savings – payback can be seen in the first year
- Elimination of wiring for dynamic braking resistors
- Elimination of dynamic braking resistors' maintenance

MODELS

Three different unit types are available to fit your application needs. IMPULSE®•R units are available with ratings from 5–100 HP, IMPULSE®•D+ units are available up to 450 HP, and IMPULSE®•D+ HHP units are suitable for uses up to 1,500 HP. They can be combined with IMPULSE®•G+ or VG+ Series 3 or 4 adjustable frequency drives and sized to fit the expected regenerative need.



IMPULSE•D+

The IMPULSE•D+ is a high-performance Active Front End Regeneration Unit in a chassis drive layout. The Active Front End technology allows the IMPULSE•D+ to minimize line harmonics below IEEE 519 requirements and regulate a consistent DC bus voltage. Combining the IMPULSE•D+ with IMPULSE•G+ and VG+ Series 4 variable frequency drives provides you with the most energy efficient, durable, and feature-rich crane control system available.

RATINGS

IMPULSE•D+	230V Class	460V Class
Input Voltage +10% / -15%	200-240VAC	400-480VAC*
Input Frequency	50/60Hz ± 2%	
Motor Rated Current	15-400A	8-560A
Horsepower Rating	5-150HP	5-450HP
Ambient Operating Temperature	-10 to 50°C (14 to 122°F)	
Power Factor	>0.99 at full load	
Overload Tolerance	150% for 60 seconds, 200% for 3 seconds	

IMPULSE•D+ HHP

The IMPULSE•D+ HHP is a modular, regenerative inverter platform designed with reliability and serviceability in mind. It utilizes Active Front End (AFE) technology to maximize crane control efficiencies with extremely low line harmonics. IMPULSE•D+ HHP units exceed the requirements defined by IEEE 519 and the common bus architecture allows the drives to share energy. Enclosures are offered with open chassis, NEMA 1, forced air cooled, or air conditioned options.

RATINGS

IMPULSE•D+ HHP	460V Class	575V Class
Input Voltage +10% / -15%	380-480VAC	500-575VAC*
Input Frequency	50/60Hz ± 3Hz	
Rated Current	414-2000A	
Ambient Operating Temperature	-10 to 40°C (104°F)	
Power Factor	>0.99 at full load	
Overload Tolerance	150% for 60 seconds, 200% for 3 seconds	

*For higher voltage, contact Magnetek Material Handling

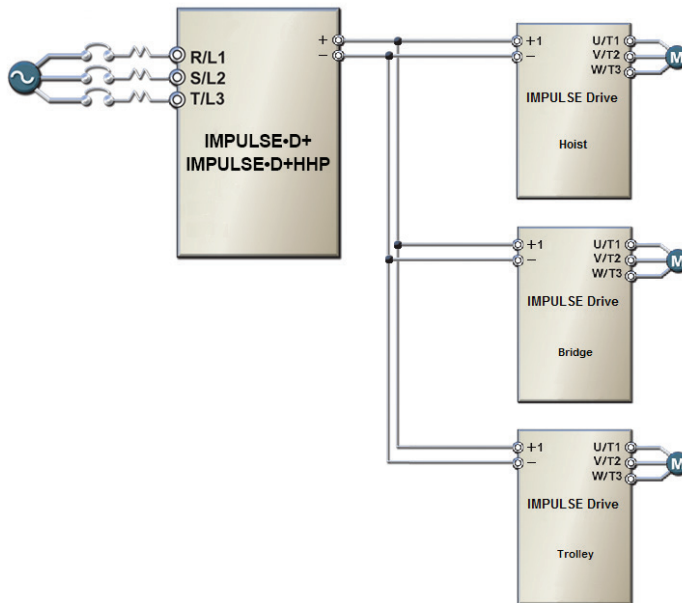


ELECTROMOTIVE SYSTEMS

YOUR ONE-STOP SOURCE FOR MATERIAL HANDLING CONTROL SOLUTIONS

With our combination of extensive application experience and leading-edge products, Magnetek provides the ultimate solution for overhead motion control.

IMPULSE•D+ & IMPULSE•D+ HHP APPLICATION DIAGRAM EXAMPLE



IMPULSE•R

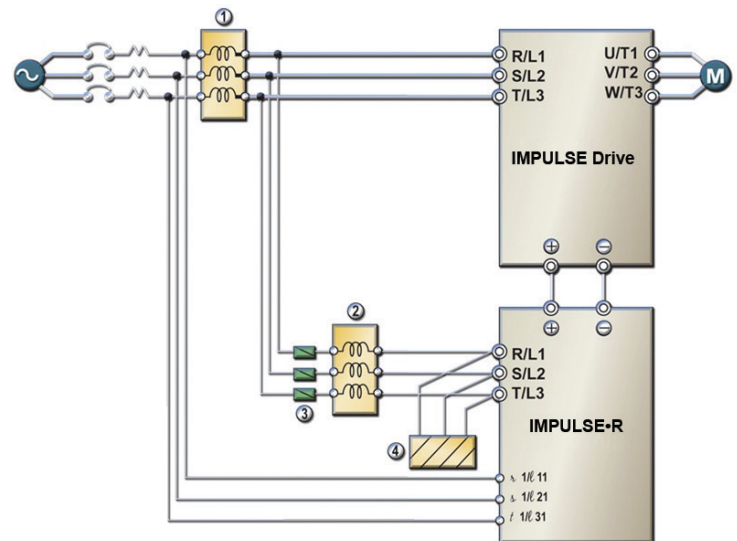
The IMPULSE•R is designed to provide a low-cost solution to add line regeneration to your overhead crane. It is as simple to operate and IMPULSE•R is sized identically to the connected variable frequency drive. The IMPULSE•R can be easily retrofitted to replace dynamic braking units and resistors on existing controls.

RATINGS

IMPULSE•R	230V Class	460V Class
Input Voltage +10% / -15%	200-230VAC	380-460VAC*
Input Frequency	50/60Hz ± 3Hz	
Motor Rated Current	15-130A	17-124A
Horsepower Rating	5-50HP	5-100HP
Ambient Operating Temperature	-10 to 45°C (113°F) protected chassis	
Power Factor	0.9 or greater	
Overload Tolerance	150% for 30 seconds, 200% peak	

For more information, contact Magnetek Material Handling or your local Magnetek Sales Representative.

DIAGRAM EXAMPLE



- ① Drive Coordination Reactor
- ② Current Suppression Reactor
- ③ Fuses/Holder
- ④ Surge Protector (MOV)



ELECTROMOTIVE SYSTEMS

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